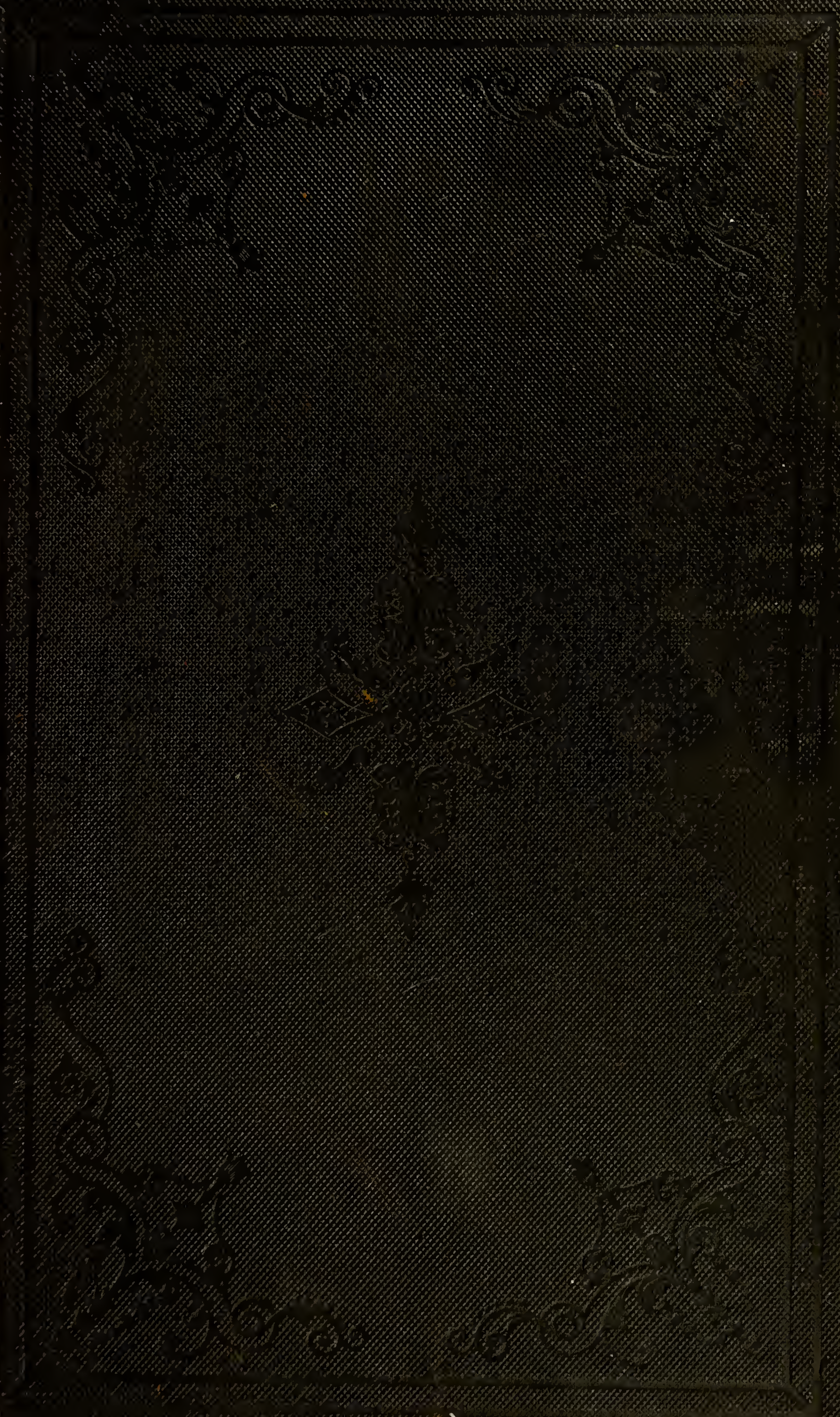

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OF THE

AFRICAN REMITTENT FEVER.

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SOME ACCOUNT

OF THE

AFRICAN REMITTENT FEVER

WHICH OCCURRED ON BOARD

HER MAJESTY'S STEAM-SHIP WILBERFORCE,

IN THE RIVER NIGER,

AND WHILST ENGAGED ON SERVICE ON THE
WESTERN COAST OF AFRICA;

COMPRISING

AN INQUIRY INTO THE CAUSES OF DISEASE IN TROPICAL CLIMATES.

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When I regard the distinguished position you hold, and consider the vast services you have rendered to the department over which you preside with so much honour to yourself and satisfaction to those who are placed under your authority, I cannot but feel very grateful for this mark of your condescension to me individually. Trust me, Sir, it will be another motive with me for dedicating myself with renewed zeal to the investigation of those climateric influences and endemical diseases to which the Naval Service of this great Empire is especially exposed in its communications with all quarters of the world.

That you may long continue to preside over the department of the public service which you have so signally advanced and made so much your debtor, is the fervent prayer of,

Sir,

Your most faithful and obliged Servant,

MORRIS PRITCHETT.

H.M.S. Spiteful,
Devonport, *March*, 1843.

PREFACE.

The following pages contain the substance of an Official Report transmitted to the Inspector-General of Naval Hospitals and Fleets, relative to the Fever which prevailed on board the Wilberforce, in common with the other vessels of the late Niger Expedition. I have here prefaced the Report, however, with a detailed history of the Cases as they were entered in my Journal at the time of their occurrence. The pressure of the duties which devolved upon me during the prevalence of the fever must plead as my excuse for any omissions which may be observed in my account of the cases:—in consequence of almost every European in the ship being attacked, and the services of both the Assistant Surgeons being required elsewhere, added to the indisposition of the late Mr. Woodhouse, Assistant Surgeon of the Albert, during the time he was on board the Wilberforce, I was left nearly unaided, and was at one time actually compelled to perform all the duties of Apothecary, Nurse, and Cook, besides those of Medical Attendant, to the whole of the sick on board. For a period of nearly six weeks I was never undressed, the nature of the cases requiring close watching both by night and by day, immediately to combat unfavourable symptoms as they arose. The active duties which have recently again devolved upon me, and the hurry of preparation for foreign service, have, I fear, prevented that careful revision which would have enabled me to correct errors and to make additions.

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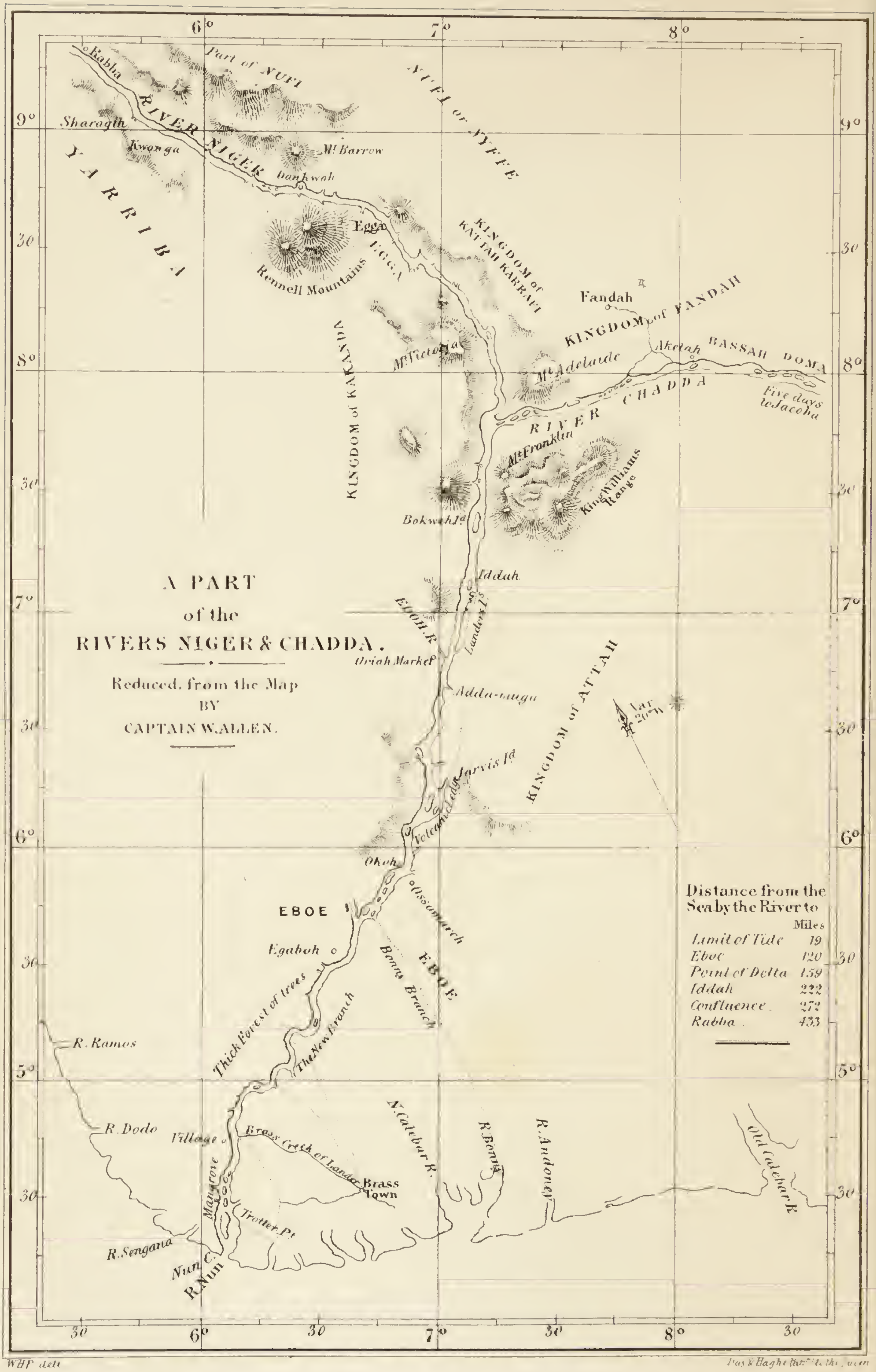

A PART
of the
RIVERS NIGER & CHADDA.

Reduced, from the Map
BY
CAPTAIN W. ALLEN.

Distance from the Sea by the River to

	Miles
Limit of Tide	*19*
Eboe	*120*
Point of Delta	*159*
Iddah	*222*
Confluence	*272*
Rabba	*433*

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SOME ACCOUNT

OF THE

AFRICAN REMITTENT FEVER.

On the 12th of May, 1841, the "Wilberforce" left Plymouth Harbour, and arrived at Madeira on the 21st, having had remarkably fine weather during the passage. On the 25th we left Madeira, and calling at Teneriffe, reached St. Vincent, one of the Cape de Verdes, on the 3rd of June. Here we remained clearing out and refitting from the 3rd to the 16th, when we sailed for Sierra Leone, which was reached on the evening of the 26th, and quitted again for Cape Coast Castle on the 2nd July. As we proceeded, we called at Liberia, and afterwards, our coals being expended, at Grand Bassa, where we staid for a week, and at Cape Palmas for wood. During the time we were at Sierra Leone, several violent tornados occurred, accompanied with heavy rains, and as we advanced along the coast to the South, we had almost constant rain for nearly a fortnight.

The officers and crew of the Wilberforce, however, continued to enjoy uninterrupted good health from the period of our leaving England until a few days after our visit to Grand Bassa, when several cases of fever occurred among the men of colour and Negroes entered in England. These were the persons principally employed in the necessary business of wooding and watering, and had been selected for the duty in preference to white men, in the belief that they would be less likely to suffer from exposure in the new country than whites. I had, however, already had opportunities in the West Indies of observing that Negroes seem frequently to have less power of resisting pathogenetic influences in foreign climates than white men. And many of the blacks and mulattos we had on board having become accustomed to the colder climates of the North, they were probably at least as liable to be attacked with disease as the European. It was among the men of colour, in fact, that the first cases of disease occurred, and I here add brief notes of these as not unimportant.

Case 1. Henry Halbert, æt. 29, Mulatto; woolly hair; born in England. Had served principally in the Mediterranean, and was a remarkably healthy, stout, muscular man. He was one of those employed in wooding and watering at Grand Bassa. On the next day after leaving that place (the 15th July), he went on the sick list with bilious head-ache till the 18th, when he expressed himself well, and returned to duty. But a few hours after, he reported himself again, complaining of rigors, head-ache, and pain in the region of the stomach, the tongue being dry and brown, and the symptoms of the most severe description. This case terminated fatally on the 23rd, nine days after the first attack. Halbert was under the care of Mr. Thomson, the senior assistant-surgeon of the Wilberforce, I myself having been confined to bed by illness.

Case 2. John Dennis, æt. 24, Black; woolly hair; born in the Gambia. Had served eight years in the Merchant service, principally in North America; was employed wooding at Grand Bassa.

Case 3. James Case, æt. 30, Mulatto; woolly hair; born in Massachusetts, North America. Had served eight years in the Merchant service, running between North America, England, and the West Indies; had had yellow fever; was employed at Grand Bassa.

Case 4. William Scott, æt. 26, ship's cook, Black; woolly hair; born in Jamaica. Had served six years in the Merchant service in North America and the West Indies. Was on shore at Sierra Leone.

Case 5. James Peters, æt. 28, Midshipmans' servant, Negro, born in Houssa, Africa; served fourteen years in the navy; four years on the coast of Africa; ten years in England. Was on shore at Sierra Leone.

Case 6. William Jackson, æt. 21, Mulatto; woolly hair; born in Jamaica; served five years in the navy; two years in the Merchant service; served in the West Indies and North America. Was on shore at Sierra Leone.

Case 7. Joseph Weston, æt. 44, ship's cook; born in Plymouth; father a coloured man; hair wiry; skin yellow; had served seventeen years in the navy; nine years in the West Indies and on the coast of Africa. The fever in this case was mild, and was probably connected with derangement of the stomach and liver.

Up to the date of our entering the Niger, five cases of fever had also occurred among white men. One only of these had been employed in wooding, &c. at Grand Bassa,—the remaining four had not been out of the vessel. But in none of them were the symptoms urgent, and they speedily gave way in all to proper treatment. The disease was decidedly of a more mild description than in the black and coloured men before specified.

From the foregoing it would appear that the Negro, when he has become accustomed to a European climate, is less able to resist the causes of disease in hot countries than the white man. The officers generally were greatly exposed to atmospherical vicissitudes and inclemencies, and to fatigue, and yet without fever, in a single instance, having presented itself among them.

Arriving at Cape Coast Castle on the 24th, we remained there till the evening of the 31st, when we proceeded to Accra, which we left for the River, the object of our voyage, on the 4th of August. As we were coasting the country from Accra to the Bights of Biaffra, two cases of fever occurred, both which did well; the patients had nearly recovered before we proceeded up the river.

On the 9th of August we came to an anchor outside the bar of the Niger; on the 15th we crossed it, and at daylight on the morning of the 20th we began steaming up the river. But few palm-trees were visible at first in the rear of the mangroves, which were extremely thick, and continued so till we had got somewhat beyond Lewis's Creek, when the palms became more abundant, although short and stunted, the mangroves in the same proportion becoming less and less numerous, until we came to the neighbourhood of Sunday Island (which was passed soon after noon), where they ceased entirely. Here reeds, bananas, plantains, the bombax, the mimosa, &c. prevailed, and occasional plantations or cultivated spots were visible intersecting the forest along the banks of the stream.

On the 23rd we passed Stirling Island, and in the evening Indiama, the largest village we had yet seen, having a fine sandy beach extending down to the shore. The people here were observed to have a very remarkable manner of dressing their hair. Many of them had the whole head shaved excepting a cock's comb about half an inch or an inch in width, sticking up vertically along the top of the head, from the brow to the crown or farther. Others had their hair shaved off in longitudinal lines, ridge and furrowwise, the ridges and furrows being of equal width ;—others, again, had the furrows intersecting at right angles, so that the head appeared checquered or cut in squares—each tuft of hair being platted, and either projecting from the head or hanging down like a pigtail. To look down from the poop of the vessel on a boat-load of these variegated heads was a remarkable sight.

On the evening of the 25th we anchored off the creek leading to Eboe, and remained there till the afternoon of the 28th.

Although more than a week had now elapsed since we entered the River, the two cases of fever which we had on board at that time had both greatly advanced towards recovery, and, what was highly satisfactory, no new case had occurred. The ship indeed had enjoyed a remarkable immunity from disease ever since she entered the delta of the Niger.

In passing up the creek leading to Eboe, some delightful-looking little huts were visible erected on the margin of the river. On landing we had to wade through flags, mud, and swamp, to reach these huts. Most of the edifices were clean, and neatly built, each being in the form of a square,—the apartments placed round the building with open corridors looking upon the court in the centre, where the cooking and other domestic processes seemed to be carried on.

On the 31st of August we had one of the finest sunsets I have ever beheld. The grandeur of the great orb of day declining behind the deep verdure of the banks of the Niger on the one side, and its rays bringing out in every variety of tint the huge silk cotton, and other trees of the opposite shore reflected in the still waters beneath, may be imagined.—The scene was indescribably beautiful.

We had now passed through the Delta, and without any disease.

On the evening of the 2nd of September we reached Iddah, whose sandstone cliffs, sixty or seventy feet high, ornamented with numerous habitations erected on the plain which crowns them, interspersed with tropical vegetation—the palm, the silk cotton, and the Adansonia digitata, or huge Baobab, of which travellers have said so much—were felt as most agreeable to the eye after the vast extent of low country, overflowed by the stream, which we had left behind.

The weather at this time was fine—sunshine all the day, but with a cool air stirring, so that it was very pleasant under the awning. "The high and rocky hills," says the Rev. Mr. Schön in his Journal, "both near and at a distance, put me in mind of the ruined castles of the Rhine, to which they bear a greater resemblance than anything else I have ever seen; the whole aspect uncommonly pleasing to the eye. I feel strongly impressed with the idea that the country we are now in must be the healthiest we have seen since entering the River. The banks above Beaufort Island are high and rocky, so that no malaria can rise from them; and if, as is said, the bed of the river here consists of sand instead of mud, nothing is to be apprehended from the receding of the water." On the 11th of September Mr. Schön has these words: "The country we are now in, the clear air and dry atmosphere we enjoy, would cause us to doubt that the climate could be dangerous, were it not for the sick and dying by whom we are surrounded. It is impossible to say to what the unhealthiness of the country must be ascribed; the appearance of it is very pleasant; the mornings delightfully cool; towards noon, however, it becomes hot, and continues so till after sunset."

It was, in fact, under circumstances so seemingly favourable that disease broke out, and soon laid prostrate many of the stoutest amongst us.

The cases of African remittent fever which occurred in the Niger I give at length, and with all the needful details.

Case 1. James Kneebone, æt. 23, seaman; tall, slight; never before out of England; had occasionally during some days past been exposed to the sun, heaving the lead, the vessel being employed surveying the river.

Sept. 4th, at Iddah; complains of having felt unwell yesterday, with loss of appetite and slight cough; has now nausea and uneasiness of stomach, with lassitude, debility, and stiffness of the joints generally. Haust. emet. statim. et postea pil. cathart.

5th, Feels better; bowels open; tongue covered with a thin white film; skin moist; obtuse pain of the head and uneasiness over the abdomen; thirst; countenance livid.

℞ Decoct. hordei, Oj.
Potas. nit. ʒj. Pro potu ordinario.

℞ Hydr. chlorid. ℈j. To be followed by castor oil in a few hours; and should this not operate sufficiently, to have magnes. sulph. ʒvj.

6th, Passed a restless night; bowels open; head-ache greatly increased; admoveantur lintea aqua frigida madefacta summo capiti sine intermissione.

℞ Hydr. chlorid. gr. iv.
Pulv. antim. gr. iij. m. ft. pulv. tertia quaque hora sumendus.

Vespere, Skin hot; head-ache continues severe; bowels open; pulse soft, 98.

7th, Had a few hours' sleep during the night; skin cool; tongue coated and yellowish; gums red; complains of a disagreeable taste of his mouth but has no ptyalism; bowels not sufficiently open.

℞ Magnes. sulphat. ʒvj.
Sodæ sesquicarb. ℈j.
Aquæ ℥iv. m. et solutioni adde acidi tartarici scrupulum unum et capiat æger statim in impetu effervescentiæ.
Habt. Quininæ disulphatis gr. iij. ter in die.

8th, No sleep; very restless; skin cool; no pain; pulse feeble; administered wine and water, and arrow-root; bowels open. Vespere, Feels better; covered with perspiration; pulse rather improved.

9th, 7 A.M. extremities cold; pulse scarcely perceptible; tongue cleaning; answers questions rationally; has no pain Adhibe balneum calidum statim; et habt. ammon. carb. gr. x. ex vini Xerici unciâ unâ omni hora. 10 A.M. has evidently rallied since the bath; takes his sago and wine willingly. 1 P.M. skin warm, and pulse more full and stronger; bowels not open. ℞ Ol. croton. ♏j. et repetatur post horas tres si necesse sit. 8 P.M. bowels freely open, rather collapsed since the opening of the bowels;

wine, sago, &c. to be frequently administered, and the quinine to be continued.

10th, Slept at intervals during the night; pulse very feeble; skin rather cold; bowels open once this morning; tongue clean, with a red stripe in the centre. Vespere, Since the morning the surface has grown hot, and the pulse full, sluggish, and intermitting.

11th, Has been very restless and uneasy; skin cold and clammy; countenance sunken, with nervous twitchings of the hands; pulse fluttering; complains of thirst and dryness of the mouth. To have some wine and water or ale for drink, and soda draught occasionally. 8 P.M. died.

Sectio cadaveris.—Body tall and rather muscular; countenance emaciated; surface livid and marbled. Stomach distended with air and a small quantity of a dirty greenish fluid; at the pyloric orifice there was a large patch of a dusky purple colour; the mucous membrane in some parts being destroyed, in others, softened. Liver paler and drier than usual. Gall bladder distended and its duct obstructed. Heart, normal. Spleen enlarged to twice the natural size, and very much softened, it being quite pulpy. Ileum, in the neighbourhood of the cœcum, discoloured; the lining membrane being of a brownish red, similar to that at the pylorus. Peyer's glands somewhat developed in particular parts. The ileum all through, and the colon for a short distance, partaking of the discoloration mentioned above, but Peyer's glands here were not largely developed. Kidneys rather vascular, but otherwise healthy.

Case 2. William Allford, æt. 22, seaman; of slight frame and healthy appearance. Had repeatedly been exposed to the sun while employed heaving the lead in surveying the river.

Sept. 5th, at Iddah, complained of having felt unwell yesterday, with lassitude, uneasiness at the chest, and some cough. Tongue white, bowels rather confined.

℞ Pulv. jalap. ℈j.
Hydr. chlorid. gr. x. m. ft. pulv. stat. sumend.

6th. Medicine has scarcely operated; tongue coated; skin cool; countenance livid; pulse small, 98.

℞ Ol. croton. ♏ j. et repet. si necesse sit post horas tres.

7th. Bowels freely operated on; has head-ache and pain behind the orbits, with starting of the eyeballs, also pain and stiffness of all the joints, especially of the hips, knees and ankles.

℞ Hydr. chlorid. gr. v.
Pulv. antim. gr. iij. m. ft. pulv. quarta quaque hora capiendus. Admoveantur lintea aqua frigida madefacta summo capiti sine intermissione.

8th. Tongue coated, white; skin cool; bowels open; pulse quick and small, 100.

9th, No sleep during the night; very restless; tongue continues covered with a thick fur; skin cool. Towards noon, however, great heat of skin and headache came on, with restlessness. Powders continued. The body to be occasionally sponged with vinegar and water; tongue becoming brownish and dry.

10th, Slept for about two hours during the night; tongue moist and cleaning; bowels open. He has evidently improved since last night. To have some arrow-root. Vespere, Skin continues cool, and the tongue cleaning.

℞ Magnes. sulphat. ʒiv.
Sodæ sesquicarb. ℈j.
Potas. nitrat. gr. viij.
Sp. æther. nit. fʒss.
Aquæ f℥iv. m. ft. haust. st. sumend.

11th, Slept well, and is better. Vespere, Has been remarkably well during the day, but heat of skin and restlessness have again supervened, with pain of the head; cold lotion to the scalp as before, and blister to the nape of the neck.

12th, Tongue clean; bowels open; febrile symptoms subsided towards morning.

℞ Quininæ disulphatis, gr. iij. ter in die capiend.

13th, Continues to improve; tongue clean, but looks red and somewhat larger than natural; bowels open twice during the night; pulse more full. Quinine continued.

14th, Much as yesterday.

15th, Continues better; skin cool; tongue clean, &c. Laughs, and says he is well. In this treacherous disease, however, one is often puzzled to determine whether a patient is to be considered as really ill or well, the transition from the one state to the other being so rapid.

16th, Convalescent. From this time he rapidly recovered, and became as well as he ever was in his life, according to his own account, till September 30th, when he was attacked with ague, from which he recovered by the use of quinine, and was again discharged to duty on the 8th of October.

Case 3. At the Island of St. Thomas, coast of Africa, on the 21st of October, Allford again complained of loss of appetite, headache, hot skin, and return of fever ; has looked pale and thin for some days past, and did not appear to improve in his general health ; anorexia ; bowels open ; tongue white ; has been taking quinine and wine twice a-day for the last fortnight.

℞ Hydr. chlorid. gr. x. st. sumendas, et post horas quatuor ℥j. ol. ricini. Capiti abraso admoveatur lotio frigida, etiamque applicetur emplastrum vesicatorium amplum nuchæ capitis.

22nd, Better ; blister has discharged well. Complains of thirst—to have saline draughts occasionally.

23rd, Looks much the same ; restless ; tongue white and moist ; blisters to the temples ; cold lotion continued ; bowels freely open.

24th, Low-spirited and restless. Up and dressed this morning, but complains of debility ; pulse feeble and quick ; tongue moist and clean.

℞ Ol. ricini ℥j. statim sumend.

25th, Much as yesterday—says he is much better; skin hot and dry; pulse quick but feeble.

℞ Magnes. sulphat. ʒvj.
Vin. ant. potass. tartratis ʒiij.
Sp. æther. nitrici ʒij.
Aquæ f℥vij. m. Capt. ℥j. tertia quaque hora.

On visiting this patient about 3 P.M. I found him lying apparently asleep with his limbs drawn up; but on closer inspection, I observed stertorous breathing with insensibility, the eyes appearing half open, and the upper lids dropping; pulse stronger than in the morning, 100; skin generally hot, but the head intensely hot; v. s. ad ℥xij; cold lotion to the head, and a large blister to the nape of the neck. About midnight relaxation of the limbs, which had been before contracted, gradually took place. When he came to himself, he appeared to awake as if from a sound sleep.

26th, Talks rationally but peevishly; was unaware of any thing done to him yesterday, such as bleeding, &c. Complains of a bad taste in his mouth, and says that every thing smells badly; refused arrow-root, but took a little weak soup. Afternoon, much better; pulse improved; tongue clean. Says he feels tired, and lies with his legs drawn up; bowels not open. Ol. ricini ℥j. statim.

℞ Ammon. sesquicarb. ℈ij.
Morphiæ hydrochlor. gr. iij.
Mist. camphoræ f℥viij. ft. mist. Cap. ℥j. quarta quaque hora.

27th, Slept badly, and has been delirious during the night, but says he is much better to-day; laughs without any apparent cause, and is decidedly wandering and fanciful in his mind. Vespere, Incoherent.

28th, Considerable heat of the skin; pulse 120, scarcely perceptible; is unable to articulate; lies with his legs drawn up, and has every appearance of approaching dissolution.

29th, Rather better this morning; took a little arrow-root and wine; passes his urine and fæces involuntarily; features pinched, expression altered; facies Hippocratica. However, he lingered on in this condition till the afternoon of the 31st, when he died at 5 P.M.

Sectio cadaveris. Fourteen hours after death,—Body emaciated. Stomach: its membranes attenuated and pale; no other morbid appearance, with the exception of one or two vessels ramifying about the cardiac orifice. A portion of the jejunum and most of the ileum dark and somewhat injected, the patches or follicles of Peyer presenting no apparent change of structure or other alteration. The colon and the end of the ileum adjoining this bowel presented nothing remarkable. Liver pale, whitish, and rather dry. Gall-bladder distended with dark bile, and the duct obstructed. Spleen about twice the natural size. Pancreas greatly increased beyond its usual dimensions, and the mesenteric glands generally enlarged. Lungs normal,—but many adhesions existed between these organs and the pleuræ. *Head.*—Scalp infiltrated with serum; membranes pale and attenuated, but the brain in many parts minutely injected ; effusion of serum into the ventricles. The brain was of much firmer consistence than is usually found, especially so long after death in a warm climate.

Case 4. William Rabling, æt. 29, sapper and miner, a stout muscular man, never before out of England. Had been employed as a blacksmith, working at the forge on deck where the sun was felt intensely hot.

Sept. 6th, at Iddah, complained of feeling unwell, with pain of the back and joints, also oppression about the chest, with cough; bowels confined.

℞ Ol. croton. ♏j. statim sumend.

7th, "Splitting headache ;" countenance livid ; slept tolerably during the night, but was disturbed by dreams ; bowels open ; pulse 102, soft and smooth ; tongue white ; pain of the back and joints continues.—Abrade caput, et admove lotionem frigidam.

℞ Hydr. chlorid. gr. v.
Pulv. antim. gr. iij. m. ft. pulv. tertia quaque hora sumendus.

8th, Is better; bowels open ; complains of great uneasiness and oppression at the chest, and also of thirst. Continue powders as yesterday.

℞ Decoct. hordei Oj.
Potas. nitrat. ʒj. Pro potu ordinario.
Applicetur vesicatorium scrobiculo cordis.

9th, Very little sleep; skin cool; tongue whitish; pulse feeble; has no pain, only general uneasiness; bowels confined. Habt. haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tart. in impetu effervescentiæ capiendus. Continuentur pulveres. Vespere, Was tolerably free from uneasiness during the morning, but accession of fever took place this afternoon; breath has the mercurial fetor.

10th, Slept at intervals; bowels open; skin cool; pulse quick and feeble. Vespere, Appears improving, tongue becoming clean, &c. Powders as before.

11th, Continues free from pain; lies quiet; bowels open. Sumat. æger quininæ disulphatis grana quinque ter in die. Vespere, This afternoon fever again came on.

12th, Much as yesterday; skin cool during the day, but in the afternoon great heat of skin, with headache. Omit the quinine, and continue the calomel powders. At noon, while moving out of his hammock, fell down in a state of syncope.

13th, Very restless; skin cool; bowels open; tongue becoming red, and larger than natural; great irritability of stomach. Imponatur emplastrum vesicatorium scrobiculo cordis. Habt. haust. salinus omni secunda hora, et vespere haust. morphiæ muriatis.

14th, 3 A.M. Slept for a short time; continues restless and thirsty; tongue clean. 6 A.M. The tongue rather dry; pulse feeble. To have arrowroot and wine. 8 A.M. A great and sudden change has just taken place. He has now stertorous breathing and dilated pupils, immovable by the approximation of light,—with every indication of approaching death. 9 A.M. Life extinct.

Remarks.—This man during his illness would frequently say that he was well, would get out of his hammock and talk to his messmates as if in full health. After the second day the pain of the head seemed to have subsided, and he complained of nothing but an inexpressible sensation of uneasiness, with debility. The only indication of danger in this case was the clean, red, and swelled tongue, which invariably appeared in the advanced stage of the disease.

CASE 5. William Lucas, æt. 26, boatswain's mate.

Sept. 6th, at Iddah, complained of feeling unwell, with headache, pain of his back, and more especially of his joints; pulse quick but soft; tongue moist and furred. Admove lotionem frigidam capiti.

℞ Hydr. chlorid. gr. xv. statim sumendas et postea ol. ricini ℥j.

7th, Much better; slept during the night; skin cool; tongue covered with a thick white fur; slight headache and thirst; pulse 90.

℞ Pil. hydr. chlorid. c. pulv. antim. tertia quaque hora capiend.

Afternoon, symptoms greatly increased; has considerable uneasiness of the stomach, with oppression and nausea.

℞ Pulv. ipecac. ℈j.
Antim. potass-tartrat. gr. i. m. ft. emet. statim sumendus.

Felt greatly relieved by the operation of the emetic. Pills to be continued.

8th, Slept badly; restless; bowels confined. Haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tart. in impetu effervescentiæ statim sumendus. Vespere, Symptoms greatly aggravated; bowels open. To be sponged with vinegar and water, and the head to be kept constantly wet with the lotion. The pills continued as before.

℞ Liquoris ammon. acet. f℥iss.
Potas. nitratis ℈iss.
Sp. æther. nitrici f℥iij.
Aquæ f℥vj. ft. mist. Sit dosis cochlearia tria tertia quaque hora.

9th, Slept badly; delirious; tongue rather dry; slight mercurial fetor; still complains of the pain and stiffness of his joints; pulse small and excited. The calomel pills continued.

10th, Breath exhales some mercurial fetor; tongue cleaning in the centre. Haust. magnes. sulphat. as before. Vespere, Bowels open; tongue clean. Continues better.

11th, Restless during the night; pulse 90; seems better; skin cool.

℞ Quininæ disulphat. gr. v. ter in die sumendas.

12th, No sleep during the night; wandering in his ideas. The calomel pills and quinine continued.

13th, Skin cool and moist; tongue dry and brown; pulse feeble. Arrow-root and wine with quinine during the day, and a morphine draught at night.

14th, Slept during the night; tongue clean; evidently improving. Vespere, Tongue brown in the centre and dry, with increased restlessness. Haust. ut antea.

15th, Seems better; has rallied. To have arrow-root and wine. Tongue soft and moist, with disappearance of the brown colour. Diaphoretic mixture to be continued.

16th, Skin hot; very restless; tongue again dry and brown. Takes arrow-root, wine, ale, &c. 9 P. M. attacked with rigors. Repeat morphine draught.

17th, Skin cool and moist; says he is much better. Noon, took some chicken-broth; tongue again moist and cleaner; bowels open; 10 P.M. seized again with severe rigors. Haust. morphiæ hydroch. c. ammon. sesquicarb. gr. viij.

18th, Is better to-day, but greatly debilitated. Quinine, ale, wine, &c. administered.

19th, Slept last night; pulse more full. 7 A.M. removed on board the Soudan at his own request, for conveyance down the river to the sea.

CASE 6. William Innes, æt. 24, marine; never before out of England; slight frame, sanguine temperament, healthy appearance.

Sept. 8th, at Iddah, complained of feeling unwell, and asked for a dose of opening medicine. On inquiry, found he was suffering from lassitude, headache, pain of his back, loins, and joints generally, with uneasiness at the chest, and some cough.

℞ Hydr. chlorid. ℈j.
Ol. croton. ♏j. m. ft. bol. st. sumendus, et repetatur post horas quatuor si necesse sit.

Afternoon bowels not open; repeated bolus. Vespere, Quite furious with delirium; great heat of skin; pulse 90, not full or strong; tongue foul; complains of his back and knees. Caput protinus abradendum et lotio frigida assidue applicanda; bowels open.

℞ Hydr. chlorid. gr. v.
Pulv. Jacob. veri gr. iij. m. ft. pil. tertia quaque hora capienda donec gingivæ afficiantur.

Could with the greatest difficulty be kept quiet while his head was shaved.

9th, 3 A.M. Nausea and sickness; copious discharge from the bowels. Applica emplast. cantharidis scrobiculo cordis. 6 A.M. skin cool; lies quiet; has slept for the last three hours; tongue coated; pulse 90; complains of his back and joints, but more especially of his knees. Vespere, Pulse stronger; recurrence of headache and heat of skin. To be sponged over with vinegar and water.

10th, Rather better; headache continues; a blister to be applied to the nape of the neck. Vespere, Quite delirious; pulse low, 120; pills continued.

11th, Has dosed a little during the night, and is better this morning; skin cool; tongue quite clean; blister discharges well; bowels open; gums reddish. Continue pills and to take the following mixture,

℞ Sodæ sesquicarb. ʒj.
Potas. nitrat. ℈ijss.
Aquæ ℥vj. m. ft. mist. cujus cap. æger ℥j. quarta quaque hora.

12th, Slept for several hours; expresses himself much better; bowels freely open; great irritability of stomach. To have effervescing draughts occasionally, and to continue the pills and mixture as above. Repeat the blister to the epigastrium. Vespere, Delirious; skin hot; tongue clean; pulse weak, 108; stomach quiet; bowels open.

13th, Slept at intervals; pulse low; lips dry; teeth covered with sordes, but the tongue clean. To have wine and arrow-root, with quinine and the morphia draught at night.

14th, Slept sound all night and is much better today; pulse fuller and regular; tongue clean and moist. Vespere, Rather feverish.

15th, Feels comfortable; skin warm; tongue looks clean, but has a peculiar red appearance, as if blood were oozing from its papillæ, which are swelled. Vespere, Took a little chicken-broth and arrowroot to day. Haust. morphiæ nocte sumend.

16th, Some return of fever to-day; tongue dry but clean, and having the same appearance as described yesterday. Quinine ter in die.

17th, Skin soft and warm; pulse more full; continues to improve.

18th, Slept well; tongue clean; complains of nothing but debility.

19th, Restless during the night, but better this morning; to have arrow-root and wine.

20th, Much as yesterday. Haust. morphiæ nocte sumendus.

23rd, Convalescent.

Oct. 2nd, Discharged to duty.

Case 7. James Cotter, æt. 31, sapper and miner, tall, of sanguine temperament. Had served seven years in Bermuda.

Sept. 11th, at Adda Kuddu, near the confluence of the rivers Niger and Tchadda; complained of severe pain in all his joints, viz. his shoulders, hips, knees, &c. as if he had caught cold, with violent head-ache, nausea, white and coated tongue, and quick pulse; bowels regular. Haust. emet. statim. et postea.

℞ Hydr. chlorid. gr. v.
Pulv. Jacob. veri gr. iij. m. ft. pulv. tertia quaque hora capiendus.

Vespere, Was relieved by the emetic; however, the headache continues. The head to be shaved and cold lotion to be applied.

12th, Feels much better this morning; skin cool; head-ache less. Vespere, Symptoms greatly increased. The powders continued with the following mixture.

℞ Liquoris ammon. acet. f℥iss.
Potas. nitrat. ℈iss.
Sp. æther. nitrici fʒiij.
Aquæ f℥vj. ft. mist. cujus sit dosis coch. triā magna tertia quaque hora. Rice water for drink.

13th, Skin hot; pulse quick; slept badly; powders and mixture to be continued. Vespere, Tongue dry and brown; quite delirious; head intensely hot. The lotion to be assiduously applied.

14th, Skin cooler; and pulse softer; tongue cleaning and becoming swelled; medicines continued. Vespere, Accession of fever.

15th, Very restless; bowels confined. To have a draught of the sulphate of magnesia with the carbonate of soda and tartaric acid.

16th, 3 A.M. Sleeps soundly. 9 A.M. says he is much better; bowels freely open; skin cool; troubled with strangury. Vespere, Slight accession of fever again to-night.

17th, Slept well; skin natural; tongue clean; says he is quite well; placed among the convalescents.

Case 8. Henry C. Toby, æt. 24, mate; stout, muscular, in full health; had previously served six years on the coast of Africa, and without a day's illness.

Sept. 11th, Was unwell yesterday, when he took some opening medicine which did not operate freely, and which was, therefore, repeated to-day. 3 P. M. found him labouring under great excitement which had just come on; he had a livid countenance, intense head-ache and heat of skin, with great oppression at the epigastrium and over the colon and ileum; pulse small, 96; bowels open once to-day; complains of uneasiness of his loins and hips, with stiffness of his joints generally.

Caput abradatur et admoveantur lintea aqua frigida madefacta sine intermissione, Habt. haust. emet. statim, postea Hydr. chlorid. ℈j., et gr. x. ejusdem quarta quaque hora repetenda.

12th, Slept for some hours; feels much better; skin cool; bowels open; feels oppression at the chest and has slight cough. Vespere, Accession of fever; is very restless. Balneum calidum statim adhibendum. The powders to be continued with the addition of pulv. Jacobi veri. Soda water for drink.

13th, Slept at intervals; skin cool; lies quiet. 10 A.M. ejected a quantity of bilious matter from the stomach; complains of thirst; takes soda-water for ordinary drink; bowels not sufficiently open.

℞ Magnes. sulphat. ʒiv.
Sodæ sesquicarb. ℈j.
Potas. nitrat. gr. viij.
Aquæ f℥iv. m. ft. haust. st. sumend. Applica emplastrum vesicatorium epigastrio.

3 P.M. great accession of fever, with discharge of green biliary matter from the stomach.

14th, Very restless during the night, but feels better to-day; powders and draught continued as yesterday; face and conjunctiva evidently yellow.

15th, No sleep during the night; head-ache intense, with stiffness of all the joints; vomiting of greenish black matter again to-day; gums reddish; a slight mercurial fetor of breath; admoveantur vesicatoria temporibus et nuchæ capitis. The powders as above continued.

16th, Slept for some hours during the night; feels comfortable; bowels open; blisters have risen and discharged a quantity of yellow serum. Vespere, Accession of fever; cold lotion to the head continued. Demittatur æger in balneum calidum.

17th, Very restless during the night. Noon, feels better, but complains of strangury and inability to discharge his urine; drew off about twelve ounces of urine by the catheter; tongue becoming bright and clean all over.

18th, Slept better and feels comfortable; omit the calomel and James's powder. 4 P.M. return of fever, which increased, and was accompanied with delirium towards the evening. Admove vesicatoria temporibus et nuchæ capitis. Irritability of bladder continues.

℞ Decoct. hordei Oj.
Sodæ sesquicarb. ʒj. m. Pro potu ordinario.

19th, 4 A.M. Sleeps soundly; skin continues warm; pulse softer and more full. Vespere, Has been comfortable during the day; bowels kept open with Seidlitz powders.

20th, Complains of pain and spasms over the colon and ileum; bowels open. Applica fotum calidum parti dolenti. Vespere, Pain and spasms relieved; copious discharge from the bowels; took a little arrow-root to-day.

21st, 7 A.M. Has retention of urine, no instrument will pass. Haust. cathart. st: et fotus regioni vesicæ;

9 A.M. passed sound and then catheter; drew off a pint and a half of urine. Vespere, Accession of fever again to-night.

22nd, Countenance looks clearer, and the eyes better; urine passes freely; bowels not open. Haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tart. in impetu effervescentiæ.

23rd, Feels tolerably well, but the heat of the skin still rather above the natural standard; urine passes freely; bowels open.

24th, Slept well; skin cool; feels greatly better. Low diet continued.

25th, Still improving. Quininæ disulphatis gr. iij. ter in die cap.

26th, Sleeps well, continues better; takes a little soup and ale.

29th, Continues free from fever.

Oct. 1st, Appetite good; sleeps well; bowels open.

21st, Discharged to duty.

CASE 9. Mr. C. G. Roscher, æt. 27, geologist; tall, muscular, healthy, of sanguine temperament; a native of Germany, never before out of Europe.

Sept. 12th, at the confluence of the rivers Niger and Tchadda; came off yesterday afternoon very ill after walking for a considerable time in the noon-day sun; complained of pain of his head, with general uneasiness of the joints, viz. loins, hips, knees, ankles, &c. He had a scruple of calomel, the contents of the stomach having previously been freely ejected by vomiting. He has slept during the night, and feels much better this morning.

℞ Hydr. chlorid. gr. v.
Pulv. Jacob veri gr. iij. m. ft. pulv. quarta quaque hora sumendus.

5 P.M. Heated and restless; pulse quick, 90; tongue coated and white, considerable pain of the head. Admoveantur lintea aqua frigida madefacta sine intermissione.

℞ Liquoris ammon. acetatis f℥iss.
Potas. nitrat. ℈iss.
Sp. æther. nitrici ʒiij.
Aquæ f℥vj. fiat mist. cujus hauriat æger unciam cum semisse tertia quaque hora.

13th, Very restless; cold lotion constantly to the scalp; skin hot and dry; pulse, 115. Calomel and James's powder every second hour, with soda draughts occasionally.

14th, Slept soundly for three hours; skin cool and moist; tongue furred; bowels open. Afternoon, great heat of skin and headache again occurred; tongue continues coated and brownish.

15th, Slept little during the night; skin moist; gums give out slight mercurial fetor; tongue cleaning in the centre. Although on first talking to this patient he appears quite well and sane, yet it is soon discovered that he is labouring under certain hallucinations—for instance, on asking him whether he had slept, he said, No. But that was not to be wondered at, for his cot was out of order—that there were two cot frames, and he had by some means got between them, and if I would examine his back, I should find the marks made by the pressure of the two cot frames. Vespere, Mercurial fetor subsided; gums look white and glazed. Omit the calomel.

16th, Appears much as yesterday; bowels kept open with Seidlitz powders.

17th, Accession of fever again to-day; skin very hot. Adhibe balneum calidum statim. Low diet continued.

18th, Slept tolerably. Habt. quininæ disulphatis gr. iij. ter in die. Vespere, Increased restlessness and fever; bowels open.

19th, Tongue clean but swelled; cold and quivering; skin cool; laughs on being spoken to, and says he is quite well. Vespere, Fever recurred again with headache—repeat blisters to the neck and temples.

20th, Slept better; skin cool; pulse rather feeble; takes arrow-root.

21st, No fever this morning; face looks paler and more natural; takes a little arrow-root. 4 A.M. got out of bed and began to walk forward from the poop, when he was assisted back to his bed.

22nd, Face pale; skin cold; pulse very feeble.

℞ Ammon. carb. gr. vj. ex vini Xerici f℥j. c. quininæ disulphatis, gr. iij. ter in die.

About noon the head again grew hot, and a fresh accession of fever took place. The wine and quinine to be suspended. Emplast. vesicatoria temporibus et nuchæ capitis. Vespere, Lies quiet; legs drawn up; no sleep; pulse, 120, feeble.

23rd, Restless; the pulse rather more full; bowels open; tongue clean; to have a little arrow-root. 3 P.M. Heat of skin and fever again came on.—It would appear as if this calorific disease was not to be quenched by any means whatever, for when it has momentarily subsided, and the patient becomes completely prostrate from debility, and appears rapidly sinking, it is still impossible to give stimulants.—9 P.M. Restless; pulse feeble. Haust. morphiæ statim sumend. Tongue continues to present a peculiar red and swelled appearance.

24th, Feels better to-day; pulse improved; bowels kept open with Seidlitz powders.

25th, Complains of debility. To resume the quinine three times a-day.

26th, Got up for a few hours; is convalescent.

28th, Getting stronger; appetite good.

30th, Appears quite free from fever; up for a short time to-day.

Oct. 4th, Discharged cured.

CASE 10. Mr. Joseph Webb, æt. 22, clerk; of slender frame, nervous temperament, delicate constitution.

Sept. 12th, at the confluence of the rivers Niger and Tchadda; complained of severe headache, but this is an old ailment, and consequent on an injury of the head which he received some time since while in the flag-ship at Sheerness. Attonde caput et applica lotionem frigidam assidue. Habt. haust. emet. statim, et hydrarg. chloridi ℈j. postea.

13th, Slept tolerably; skin cool. 12 A.M. pain of the head considerably increased, with uneasiness in the back, loins, hips, and joints generally. Vespere, Stomach irritable, causing nausea and vomiting. Soda water for drink. Pil. hydr. chlorid. et pulv. Jacob. veri quarta quaque hora capienda.

14th, Headache increased; pain of the back and joints subsided; bowels not open.

℞ Magnes. sulphat. ʒiv.
Sodæ sesquicarb. ℈j.
Potas. nitratis gr. viij.
Aquæ f℥iv. m. ft. haust. st. sumend. Applica emplast. vesicatorium nuchæ capitis.

15th, No sleep during the night; skin covered with cold perspiration; pulse weak; tongue cleaning. To have a little arrow-root. The calomel and James's powder continued, with Seidlitz powders occasionally to operate on the bowels.

16th, 3 A.M. Very restless and uneasy; pulse feeble; dreams a great deal, and talks in his sleep; tongue cleaning in the centre. 2 P.M. Nausea, with vomiting of biliary matter. Some soda-water was afterwards given, and a blister applied to the epigastrium, which quieted the stomach. Vespere, Considerable headache. Applica vesicatoria temporibus.

17th, Slept at intervals during the night; skin hot; pulse feeble; severe pain of the head continues; blisters rose well; great irritability of stomach, but no vomiting. Adhibe vesicatorium epigastrio. Vespere, Gums swelled; slight mercurial fetor of the breath present.

18th, Slept for four hours in the middle watch; mercurial odour of the breath subsided; tongue cleaning and becoming red and swelled; pulse feeble; nausea continues. To have soda draughts and arrow-root.

19th, Slept soundly; pulse more full; appears in good spirits, laughs, and says he is getting well with great speed. Vespere, Recurrence of fever and headache, with delirium. Repetantur vesicatoria temporibus et nuchæ capitis.

20th, Better to-day; tongue clean; pulse feeble. Vespere, Lies quiet; skin cool. Takes a little arrow-root.

21st, Much as yesterday; bowels confined. Seidlitz draught. Towards evening restlessness again supervened.

22nd, Feels comfortable, and is more cool to-day; takes arrow-root.

23rd, Continues better. Quinin. disulphatis gr. iij. ter in die.

25th, Some remains of fever still exist at night, with great debility, so as to render him unable to move without assistance.

30th, Is gaining strength, but the stomach is very irritable.

Oct. 1st, Stomach retentive, and is going on well.

3rd, Discharged to duty.

CASE 11. Mr. Louis Frazer, æt. 22, zoologist; stout, muscular, of leucophlegmatic temperament; never before out of England.

Sept. 12th, Was on shore yesterday morning at Adda Kuddu, near the confluence of the Niger and Tchadda, walking for some hours at noon in the sun, when he came off suffering from fever. A scruple of calomel was immediately exhibited, followed by Epsom salts.

13th, Much better this morning; bowels open; pain of head greatly subsided; tongue coated. Vespere, Pain of head much aggravated. Capilli ad cutem tondeantur et lotio spiritus sedulo applicetur, atque exhibe hydr. chlorid. grana quinque cum pulveris Jacobi veri granis tribus pro dosi quarta quaque hora.

℞ Liquoris ammoniæ acetatis f℥iss.
Potassæ nitratis ℈iss.
Sp. æther. nitrici ʒiij.
Aquæ ℥vj. m. ft. mist. cujus sumat æger unciam cum semisse pro dosi omni tertia hora.

14th, No sleep, but the pain of head and heat of skin have again abated this morning. Continue the powders and mixture. Vespere, Quite delirious; face flushed; tongue coated. Lotio frigida capiti sedulo applicetur.

15th, Complains of no pain anywhere; has slept badly; great prostration of strength; face looks red although cold; skin cold and moist; some uneasiness extending down his back.

16th, 3 A.M. Sleeps soundly; skin hot. 9 A.M. Headache; tongue covered with a thick, moist, brownish fur; bowels not open.

℞ Magnes. sulph. ʒvj.
Sodæ sesquicarb. ℈j.
Aquæ ℥iv. misce, et solutioni adde acidi tartarici scrupulum unum et statim hauriat æger.

17th, Bowels open; skin natural; slept at intervals during the night; tongue continues covered with a thick yellowish fur. Says he is now very well.

18th, Accession of fever again to-day; slight mercurial fetor; gums whitish and glazed. Omit the powders, continue the mixture.

19th, No sleep during the night; tongue dry and brown; face again flushed; bowels not open. Repeat the effervescing draught as above.

20th, Bowels freely open; tongue continues thickly coated. Vespere, Fever again very great, with intense heat of the scalp. Admove vesicatoria temporibus et nuchæ capitis.

21st, Blisters rose well; skin cool. Says he is quite well, and does not know why he is kept in bed.

22nd, Tongue continues very foul; heat of skin returned with violence this afternoon; pulse 115. The effervescing aperient draught as before.

23rd, Slept badly; skin cold; bowels open; tongue becoming clean and red.

24th, Continues much as yesterday. Takes some arrow-root.

25th, Bowels open ; skin cool and clammy ; pulse 90. However, this evening fever again occurred. To have the saline aperient.

26th, The pulse more full, 88 ; bowels open.

27th, Slept well ; greatly debilitated. Vespere, Accession of fever again towards evening.

28th, 5 A.M. Fever subsided, and a little sleep ensued during the day ; continued quite cool till 4 P.M. when a recurrence of febrile symptoms again took place, with delirious talking. Emplastra vesicatoria repetantur temporibus et nuchæ.

29th, Blisters discharged well; pulse feeble and skin cold. A few spoonfuls of arrow-root were given to-day to support the strength, but nothing of a more stimulating nature. Towards evening his usual visitant, a burning head and excessive thirst, again assailed him ; his tongue continues thickly coated, and has presented the same appearance for many days past.

30th, Continues as before. In the afternoon rigors and heat ensued as usual, and afterwards sleep followed.

Oct. 1st, has been to-day much as during the past week, cool and quiet, with recurrence of fever at night. Takes his saline mixture.

2nd, Tongue dry ; pulse is sluggish and intermits remarkably, sometimes after every second beat, and again at every third.

3rd, A great change in the appearance of the face has taken place to-day; the pulse much the same as yesterday—sometimes very weak, at other times more full and strong; remains quiet, with a placid countenance, but is scarcely able to rise up to take a spoonful of arrow-root; approaching dissolution would appear to be indicated by the symptoms.

4th, Slept during the night, and is evidently much better to-day.

5th, Continues doing well. Ol. ricini ℥j.

6th, Ventured to-day on quinine and wine.

7th, Discovered a slough over the sacrum, which was immediately attended to. Continue wine and quinine.

8th, Bowels confined. Ol. ricini ℥j.

10th, Slough of sacrum separating. Wine and quinine as before.

12th, Adhibe cateplasma parti dolenti.

14th, Appetite excellent. Takes port-wine, ale, quinine, &c.

16th, Slough is rather deep, and separates slowly; strength supported by meat diet, wine, ale, &c. Cataplasma nocte maneque.

18th, Slough separating, but seems to extend in depth. Treatment continued as above.

31st, Wound healing very rapidly.

Nov. 16th, Wound very healthy, and granulations rapidly approximating the edges.

20th, Ulcer forming on the posterior surface of the heel of the right foot.

30th, The ulcer on the hip healing—but that on the heel rather inflamed and painful. Medicamina vulneribus secundum artem quotidie applicanda.

Jan. 30th, Discharged to duty.

Case 12. William Bailey, æt. 22, cooper; slight, healthy, of sanguine temperament.

Sept. 14th, at the confluence of the Niger and Tchadda, complained of headache and nausea; of general pain in all his joints, as well as of the back and loins; tongue white and coated; countenance livid; oppression at the chest and slight cough. Haust. emetic. statim et postea hydr. chlorid. ℈j. Lotio spiritus abraso capiti assidue applicanda. Vespere, Bowels open.

℞ Hydr. chlorid.
Pulv. Jacob. veri āā gr. iij. m. Capiat æger pulverem similem tertia quaque hora donec gingivæ afficiantur.

15th, Much better this morning; skin hot; pain of back as yesterday. Powders continued. Vespere, Very restless.

16th, Skin cooler; slept tolerably well last night. Vespere, Very restless; tongue rather dry and brownish; bowels not open. Haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tartaric. in impetu effervescentiæ capiendus.

17th, Delirious during the night, and has severe pain of the head behind the orbits, with excited pulse; tongue becomes soft and moist, and then brownish and dry, at intervals. Applica vesicatorium amplum nuchæ; pulveres continuentur.

18th, Restless and delirious during the night;

tongue has a thick brownish fur; pulse 90; pain extends from the back to the calves of the legs.

℞ Sodæ sesquicarb. ʒj.
Potas. nitratis ℈ijss.
Aquæ f℥vj. m. ft. mist. cujus æger capiat unciam unam tertia quaque hora.

19th, Fever continues; tongue dry and brown; face and eyes red; has diarrhœa and retention of urine; catheter passed. The calomel and James's powder continued.

20th, Complains of nausea and irritability of stomach; tongue brown and dry; soda draughts occasionally. Applice cucurbitula et postea vesicatorium amplum epigastrio—intermitte pulveres.

21st, Greatly better; some cessation of febrile action this morning; tongue moist. Haust. effervescens ter in die. Complains of strangury. Decoct. hordei pro potu communi.

22nd, Face flushed; tongue dry, but swelled and tremulous; bowels not open. Haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tart.

23rd, Remains quiet.—10 A.M. On moving from his hammock to the close-stool, in immediate proximity, became suddenly faint, and afterwards continued tossing about and moaning for a considerable time. Takes soda draughts occasionally.

24th, Tongue brown and dry; face cool, but with occasional flushes of heat; pulse 100. Haust. magnes. sulphat. ut supra.

25th, Slept for some hours; skin cool, but complains of thirst; tongue clean and dry; brown appearance gone. Vespere, Very restless and moaning; tongue dry. Haust. morphiæ statim.

26th, Slept well and seems better to-day. Vespere, Again restless and heated ; complains of general uneasiness with headache. Vesicatoria temporibus, et haust. morphiæ ut supra.

27th, Lies very uneasy ; blistered surfaces discharged well; tongue continues dry and swelled. Vespere, Increased restlessness; groans and moans continually. Haust. morphiæ statim, et repete vesicatoria nuchæ et temporibus.

28th, Slept tolerably, and is better to-day. Vespere, Again became restless, with a dry glazed tongue, and laminæ peeling from its surface. Takes diaphoretic mixture.

29th, Much as yesterday ; to have quinine and arrow-root.

30th, Better this morning. At noon dropping of the upper eye-lid and under jaw took place; tongue continuing dry and glazy; lies quiet ; face pale ; speaks indistinctly. Repeat blisters to the temples and nape of the neck ; takes a little arrow-root and wine. Haust. morphiæ hora somni.

Oct. 1st, Slept well, and looks better ; lower jaw still drops ; but the tongue is not so dry as before.

2nd, Continues much as yesterday, except that the tongue continues clean, dry, and swelled ; much restlessness. Morphia draught at night.

3rd, No alteration ; bowels confined. Ol. ricini ʒvj. ex cyatho choavæ.

4th, Bowels operated on ; some improvement took place this morning, but he again retrograded at night.

5th, To-day opened several small abscesses which had formed about the head and neck; tongue more moist; bowels open; appetite good.

6th, Slept well and is better; tongue still rather dry but quite clean; takes quinine and Seidlitz powders to operate on the bowels.

7th, Continues better. Takes wine and quinine.

8th, Very restless all night; pulse quickened; tongue dry. Ol. ricini ʒvj.

9th, Much better; tongue moist; bowels open; appetite good.

10th, Opened several abscesses about the neck and forehead.

12th, Steadily improving.

17th, Discharged to duty.

Case 13. Mr. Henry C. Harston, æt. 29, lieutenant.

Sept. 14th, Vespere, Was removed from the Amelia schooner tender, to the Albert, which he had been commanding, into the Wilberforce, having been suffering from fever since the evening of the 11th, during which time he had been under the care of Dr. M'William.

I found him in a state of complete exhaustion from the fatigue of moving, with severe headache, vertigo, hot and dry skin, pain of the loins and legs, also spasms of the abdomen about the colon and ileum; thirst and great irritability of stomach; tongue coated and slimy. Tonde capillos ad cutem et adhibe lotionem frigidam capiti.

℞ Hydr. chlorid.
Pulv. Jacob. veri āā gr. iij. m. ft. pulv. et capiat æger tertia quaque hora donec gingivæ afficiantur.

Soda water occasionally, and rice water for common drink. 12 P.M. More comfortable; considerable heat of skin continues, but he feels better.

15th, Has been delirious during the night; talks rationally, but labours under delusions. Vespere, Has been considerably better to day, although there was an accession of fever in the afternoon.

℞ Liquoris ammon. acet. f℥iss.
Potassæ nitrat. ℈iss.
Sp. æther. nitrici. ʒiij.
Aquæ f℥vj. fiat mist. sit dosis cochlearia tria magna tertia quaque hora.

12 P.M. Bowels open; discharges of a brownish feculent nature; complains of aching of his loins and limbs; has been vomiting.

16th, 3 A.M. Feels easy, but skin continues intensely hot; takes his powders and mixture; pulse small and quick; tongue coated, dry, swelled and tremulous. Evening; increased pain of the back and legs, with restlessness, but on the whole seems going on well; slight mercurial fetor of the breath is present; bowels confined. Haust. Seidlitz.

17th, Had intervals of sleep; bowels open. 4 A.M. Quite wandering and incoherent. 8 A.M. Better; appears sensible; said he knew he had been fancying all sorts of things; tongue losing its coating in the centre; gums slightly red.

18th, Slept for three hours during the night; pulse softer and fuller; tongue moist and cleaning. Omit the powders.

19th, Slept badly; much as yesterday; complains of debility. 8 A.M. Transferred to the Soudan at his own request, for passage down the river to the sea.

Case 14th, Mr. James E. Terry, æt. 23, commissioners' clerk; tall, slight, of nervous temperament; had suffered from fever at Sierra Leone, where he had resided for eighteen months prior to his joining the expedition in England.

Sept. 14th, at the confluence of the rivers Niger and Tchadda, had been employed for the last few days on board the Albert, preparing treaties under the awning on deck, where the sun was very oppressive. At noon obliged to return to the Wilberforce with severe headache and pain of back and loins; violent sickness and great prostration; slight pain of chest, and cough. Haust. emet. statim, et post ejus operationem hydrargyri chlorid. ℈j. Hair to be cut close, and evaporating lotion to be applied to the scalp.

15th, 7 A.M. Slept for some hours during the night, and says he is quite well to-day; however, about 10 A.M. all the symptoms of yesterday again came on, increased in violence; bowels open; tongue coated.

℞ Hydr. chlorid. gr. v.
Pulv. Jacob. veri gr. iij. m. ft. pil. ter in die capienda.

16th, Says he is better; skin dry; tongue brownish.

℞ Liquoris ammon. acet. f℥iss.
Potas. nitrat. ℈iss.

Sp. æther. nitric. ʒiij.
Aquæ ℥vj. fiat mist. cujus æger capiat unciam cum semisse tertia quaque hora.

17th, Felt much better till noon, when headache and pain of back and joints came on as before. Soda-water for drink. The pills and mixture continued. Emplast. vesicat. nuchæ.

18th, Not so well to-day; looks yellow and shrunk; has headache, and feels greatly debilitated, with nausea and vomiting; bowels confined. Haust. Seidlitz.

19th, Slept tolerably; tongue becoming clean and red; felt better till 3 P.M. when fever again came on; mouth slightly affected with the mercury. Repeat Seidlitz draught.

20th, Passed a restless night, but is this morning free from fever; bowels open. Quinæ disulphatis gr. v. ter in die capiend.

21st, Rather better; skin and conjunctiva yellow. Haust. Seidlitz. 5 P.M. Again complains of severe headache; pills and mixture continued.

22nd, Skin cool; pulse feeble; complains of debility; gums rather red; and breath exhales slight mercurial fetor. Omit the pills. Quinine as before, with a little wine.

23rd, Slept well; skin cool; countenance looks better. Haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tartaric. in effervescentiæ impetu capiendus.

24th, Pulse more full and regular; tongue clean; bowels open. Continue quinine.

25th, Continues free from fever. Haust. Seidlitz.

27th, Appetite good ; takes quinine and wine.

30th, Discharged to duty.

Case 15th, Henry Collins, æt. 25, blacksmith ; strong, muscular, of healthy appearance and nervous temperament ; had been employed for some days past working at the forge near the gangway, where the heat of the sun was very intense.

Sept. 15th, Complained of lassitude, severe headache and pain in all his joints, with intense thirst; skin very hot. Haust. emetic. statim et postea hydr. chlorid ℈j. Hair to be cut close, and spirit lotion to be applied to the head.

16th, Skin continues hot; tongue white; pulse small and quick; complains of pain in his shoulders, elbows, back, hips and knees. To be sponged over with vinegar and water; to have a pill of calomel and James's powder every four hours, and to take the following mixture.

℞ Liquoris ammon. acetatis f℥iss.
Potas. nitrat. f℈iss.
Sp. æther. nitrici ʒvj.
Aquæ ℥vj. m. ft. mist. ℥iss. omni tertia hora capienda.

17th, Slept for a few hours, and feels better this morning; bowels not open. To have a saline aperient. Vespere, Symptoms increased; is delirious. A blister to the nape of the neck.

18th, Complains of thirst, of vertigo, and great debility; bowels open. Continue medicines.

19th, Lies quiet; pulse feeble; tongue yellowish and rather dry.

20th, Skin warm and moist; nausea and vomiting of dark green bile took place at noon, after which he felt relieved; gums white and glazed. Omit the calomel.

21st, Complains of debility and uneasiness of the back and legs. Vespere, Haust. colchici (♏xxx.) c. sol. morph. mur. ♏xx.

22nd, Slept well; skin cool; tongue clean; bowels not open. To have a saline aperient draught at night as before.

23rd, Feels better; tongue clean. Quinæ disulphatis gr. iij. ter in die.

24th, Much as yesterday; bowels not open. Repeat the saline aperient.

25th, Looks well; is improving; appetite good; tongue moist.

30th, Gaining strength. Continue the quinine. To have ale, &c.

Oct. 6th, Discharged to duty.

Case 16, Edwin Hoskin, æt. 22, purser's steward; tall, slight, in full health, of sanguine temperament; had been greatly exposed to insolation while purchasing provisions from the natives for the use of the ship's company.

Sept. 16th, at the confluence of the rivers Niger and Tchadda, complained of severe headache, which came on last night; tongue clean; pulse small and excited. Says he feels a peculiar numbness extending down the thighs from the back and hips, with stiffness of the joints generally; skin very hot; has slight cough. To be sponged over with vinegar and water every hour. Haust. emet. statim et postea hydr. chlorid. ℈j. sumendus, qui olei ricini ℥j. sequendus; et postquam venter rite solutus fuerit, capiat æger pil. hydr. chlorid. et pulv. Jacob. veri tertia quaque hora.

17th, Slept a good deal during the night, but is excited to-day again, with hot skin, headache, redness of the eyes, numbness of the legs, &c.; pulse 115; tongue coated with white fur.

18th, Very restless during the night; headache continues; bowels confined. To have a saline aperient.

19th, Slept at intervals; skin much cooler to-day; complains of debility. 8 A. M. Transferred to the Soudan for conveyance down the river to the sea at his own request.

CASE 17. John Wilson, æt. 20, captain's cook; tall, slight, of sanguine temperament and healthy appearance.

Sept. 16th, at the confluence of the rivers Niger and Tchadda, complained of headache, with pain of his joints generally; tongue coated with white fur; skin hot; pulse rather strong; v. s. ad ℥xij. et postea haust. emet.; ac cum vomitus cessaverit hydr. chlorid. ℈j. capiatur. Lotio spiritus capiti sedulo applicanda. Pil. hydr. chlorid. et pulv. Jacob. veri quarta quaque hora.

17th, Very restless all night; face flushed; very uneasy in his back, loins, and limbs; bowels not sufficiently open. To have a saline aperient.

18th, Slept for a short time towards morning; has diarrhœa; skin hot; tongue covered with white fur; complains of considerable pain in the head, back, and legs—that of the back and legs he says moves up and down. Vespere, Became wandering and delirious.

19th, Rather cooler this morning. Medicines continued.

20th, Febrile symptoms again increased to-day; gums not affected by the calomel. To have a colchicum draught at night.

21st, Slept better last night; complains of debility. Continue medicines.

22nd, Face pale; is restless; continues cool; bowels confined. To have a saline aperient, and the draught at night to be repeated.

23rd, Much as yesterday; tongue clean and swelled; lies quiet.

24th, Pulse more regular and full; bowels confined. Repeat the saline aperient.

25th, Complains of debility. To-day ventured on quinine ter in die.

26th, Added wine to quinine. Doing well.

Oct. 2nd, Discharged to duty.

Case 18. James M'Clusky, æt. 22, stoker; tall, slight, never before out of England.

Sept. 16th, at the confluence of the rivers Niger and Tchadda, complained of headache, with rigors, after which great heat of skin supervened, also a sensation of numbness in the loins extending down the thighs, with general stiffness of the joints, oppression at the stomach, slight cough, and livid countenance. Haust. emet. statim et postea hydr. chlorid. ℈j. Vespere, Haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tartaric. in statu effervescenti.

17th, Rather better this morning; pulse softer and more full; tongue becoming white and coated. Admove lintea lotione spiritus madefacta assidue capiti. Pilula ex hydrarg. chlorido et pulvere Jacobi vero composita ter in die sumenda donec ptyalismus supervenerit.

18th, Towards noon the symptoms became greatly aggravated, attended with nausea and vomiting, which latter symptoms were allayed by soda draughts and a mustard cataplasm to the stomach. Takes saline diaphoretic mixture.

19th, Wandering and delirious during the night. Medicines continued.

20th, Gums red and swelled; mercurial fetor of the breath and slight ptyalism present; face shrunken and yellow. To take a saline aperient draught.

21st, Appears better; skin cooler and pulse more full; bowels open; complains of strangury. Utatur gargarisma aluminis subinde; intermitte pulveres hydrarg. chlorid.

℞ Decoct. hordei Oj. sodæ sesquicarb. ʒj. m. pro potu ordinario.

22nd, Complains of thirst; pulse very feeble. 3

P.M. Great heat of skin and pain of head again supervened this afternoon. Emplastra vesicatoria temporibus et nuchæ capitis adhibe.

23rd, Tongue rather dry and pale, swelled, and tremulous ; very restless. Continue the saline diaphoretic and aperient mixtures.

24th, Considerable excitement again to-day, with wandering and delirium ; bowels open ; tongue brown and dry. Haust. morphiæ nocte.

25th, Had some sleep, but disturbed by dreams; face livid and shrunken; complains of debility. Haust. nocte ut heri.

26th, Says he is better; however, about noon, excitement again came on, accompanied by a look of vacancy and dilatation of the pupils. Repeated blisters to the head as before.

27th, Slept better; blisters discharge well; bowels open. Haust. morphiæ nocte.

28th, The tongue becoming moist; skin warm and moist.

29th, There still continues an appearance of vacancy, almost amounting to idiotcy, about this patient, which I can scarcely understand; there is certainly a tendency to effusion into the brain, which has probably been relieved by the repeated application of blisters; he groans and mutters constantly, without any apparent reason.

30th, Is rather better. Habt. Quininæ disulphatis gr. iij. ter in die cap.

Oct. 1st, Still looks vacant; has dilated pupils, and stutters and stammers when spoken to; bowels kept open by the saline aperient, and discharge encouraged from the blistered surfaces. Quinine continued.

2nd, Tongue has become dry; but the countenance is rather improved; articulation easier, and he talks more rationally.

3rd, Says he is much better; tongue becoming moist; and the eyes do not look so vacant.

5th, Continues improving; pupils dilated. Repeat blisters to the nape of the neck and temples.

7th, Has good appetite; bowels regular. Takes wine, ale, &c.

10th, Rapidly improving.

17th, Discharged to duty.

Case 19. Peter Fitzgerald, æt. 27, stoker; stout, muscular, of phlegmatic temperament.

Sept. 16th, at the confluence of the rivers Niger and Tchadda, complained of severe pain of the head, with uneasiness of the loins; but more especially of the joints; viz., legs, knees, shoulders, &c., with nausea and irritability of stomach. Haust. emetic. statim, et postea hydr. chlorid. ℈j. Adhibe lotionem evaporantem abraso capite.

17th, Bowels open; skin hot; some irritability of stomach, and discharge of bile.

℞ Hydr. chlorid gr. v.
Pulv. Jacob. veri gr. iij. m. ft. pil. quarta quaque hora sumenda.

18th, Feels better to-day; has some diarrhœa; tongue whitish, and coated.

19th, Much as yesterday; nausea still exists, with some discharge of biliary matter from the stomach; complains also of oppression at the chest. Pills continued.

20th, Headache better; bowels rather confined than otherwise; some nausea; tongue cleaning in the centre.

℞ Magnes. sulphatis ʒiv.
Sodæ sesquicarb. ℈iss.
Aquæ ℥vj. misce et haustum in impetu effervescentiæ ipso cum acidi tartarici scrupulo in aquæ unciâ soluto æger hauriat.

21st, Complains of debility; heat of skin returned; bowels open; tongue swelled, and becoming dry. Soda draughts occasionally, also a blister to the epigastrium. Pills as before.

22nd, Slept at intervals; skin cooler than yesterday; eyes somewhat red and suffused; pulse full, 90; tongue clean, red, and dry; bowels confined. Repeat the saline aperient.

23rd, Better to-day; skin cool; complains of debility; bowels open; tongue clean and dry; gums swelled, but glazy and whitish. Omit the pills.

24th, Continues uneasy, but free from fever. Quininæ disulphatis gr. v. ter in die capienda.

25th, Much as yesterday. Quinine continued.

26th, Slept well; is better to-day, but towards evening great restlessness supervened, and the tongue became glazed and dry, with confusion of ideas. Emplastra vesicatoria temporibus quamprimum imponenda.

27th, More composed this morning, but the tongue continues swelled and dry.

28th, Slept badly; is thirsty; pulse quick and weak. To have wine and water, with arrow-root occasionally; complains of difficulty of passing his urine; passed catheter.

℞ Decoct. hordei Oj. potas. nitr. ʒj. m. pro potu ordinario. Vespere, haust. morphiæ mur.

29th, Says he feels better, but still complains of thirst; skin yellow; pulse 108. Haust. Seidlitz.

30th, Slept well, and is better ; complains of oppression about the heart; tongue clean, but continues glazed and dry. Wine and arrow-root occasionally, with a morphine draught at night. Repete vesicatorium regioni epigastrica.

Oct. 1st. Much as yesterday; is restless; tongue continues red, swelled, and dry; bowels free.

2nd, Restless during the night; towards morning some moaning, with singultus ; abdominal respiration then ensued suddenly, and at 12 A.M. he died.

Remarks.—This was one of the cases in which the disease was masked, the symptoms, with the exception of the clean swelled tongue, not indicating danger ; he complained of no pain, said every day that he was tolerably well, and up to the morning of his decease appeared improving ; he suddenly sank, however, under this most insidious malady, while others who had laboured under every appearance of approaching death, recovered. I regret that the vessel was so crowded with sick as to preclude the possibility of making any post-mortem investigation.

Case 20. Samuel Hill, æt. 39, marine; rather tall and stout, of bilious temperament; had served seven years on the Mediterranean station.

Sept. 16th, at the confluence of the rivers Niger and Tchadda, at noon suddenly felt unwell, with nausea and vomiting; countenance pale and sunken; headache. Haust. emetic. statim et postquam vomitus cessaverit exhibe hydr. chlorid. ℈j. Vespere, Severe headache, with pain of back, loins, and legs.

17th, No sleep all night; face pale; tongue coated with thick slimy fur; severe pain of head and back. Lotio evaporans capiti; corpus aqua tepida subinde lavetur. To take the saline diaphoretic mixture every four hours.

18th, Very restless and delirious during the night; tongue thickly coated, and brownish, but moist on the centre and back part; vomits green biliary matter; bowels freely open; the discharges black and very fætid; head easier; pain of back increased.

19th, Slept at intervals; free from fever, but countenance yellow and anxious.

20th, Is rather improved; skin cool and moist. At noon, on moving from his hammock to the close-stool in immediate proximity, he dropt down in a state of syncope; after which, severe spasms occurred, but soon subsided.

21st, Continues cool, but the countenance looks sunken, and the pupils are dilated.

22nd, Slept well; skin cool; no fever to-day; discharges kept up from the bowels by Seidlitz powders. Adhibe vesicatorium amplum nuchæ.

23rd, Rather better; tendency to febrile action still exists.

24th, Goes on well, but is greatly debilitated, and faints on any exertion. Quinine ter in die.

26th, Tongue becoming clean and bright; pulse fuller.

Oct. 1st, Sleeps well, and appetite good.

5th, Quinine continued.

10th, Discharged to duty.

Case 21. Mr. William Simpson, æt. 50, commissioner's clerk; tall, of bilious temperament; appearance healthy; had resided nine years in Mexico and the West Indies; had suffered from yellow-fever severely, and had recovered after being affected with the black vomit, by his own statement.

Sept. 16th, at the confluence of the rivers Niger and Tchadda, at noon returned from the "Albert," where he had been employed writing on deck, suffering from insolation; complained of severe headache, with pain of the back and loins; also very violent vomiting of biliary matter, and diarrhœa.

℞ Lotio frigida capiti; hydr. chlorid. ℈j. quando vomitus cessaverit sumendum.

17th, Slept soundly, and was up and walking about this morning, saying he was perfectly well;

10 A.M. Began to feel unwell; eyes sunken; countenance yellow—looks perfectly cadaverous; tongue dry, cracked, and brown; also contracted and pointed at the extremity. Ol. Ricini. ℥j. statim; accipiantur pulveres ex hydr. chlorid. et pulv. Jacob. veri parat. ter in die donec ptyalismus supervenerit.

18th, Slept at intervals; feels much better; tongue soft and moist; bowels open; however, soon after breakfast the face became flushed and the skin hot, when severe aching pain of the back and loins supervened, with an inexpressible sensation of debility. Continue powders.

19th, Skin cool; bowels open; looks yellow, shrunk, and death-like. Powders continued, with the saline diaphoretic mixture. Towards noon recovered his general appearance, and felt better.

20th, Slept badly; looks sunken; tongue moist, but furred; bowels not open. To have the saline aperient.

21st, Feels better; appearance improved. Continue powders.

22nd, Some febrile action again to-day; tongue cleaning.—Ol. ricini ʒvj. statim.

23rd, Slept well; skin cool; countenance more healthy. To have the saline aperient; also quinine thrice daily.

24th, Continues improving. Medicines as above.

26th, Gaining strength; takes wine, ale, soup, &c.

30th, Discharged to duty.

CASE 22. Mr. William Forster, æt. 28, master;

of plethoric habit, and sanguine temperament; had served several years in the West Indies; never suffered from fever.

Sept. 17th, at the confluence of the rivers Niger and Tchadda, has complained of feeling very unwell, and of having severe headache since he was exposed to the sun at noon while making observations on shore a few days ago; he had taken a scruple of calomel, followed by some sulphate of magnesia, and kept quiet since that time, using an evaporating lotion to his head, when hot or painful; to-day the headache is increased, and there is nausea and a disposition to vomit. Habeat haustum emeticum, et postquam vomitus cessaverit sumat æger pulv. hydr. chlorid. et pulv. Jacob. veri ter in die.

18th, Slept tolerably well; pain and lightness of head continue when in an upright position. Affusio frigida capiti adhibenda et repetenda prout res poscat.

19th, Starts in his sleep, and has disagreeable dreams; complains of vertigo; face flushed; pulse quick and small; bowels not open. Haust. Seidlitz; powders as before.

20th, Much as yesterday; complains of dizziness of the head. Habeat vesicatorium amplum nuchæ ac alia temporibus. Vespere, Blistered surfaces discharged about ℥iij of serum.

21st, Less uneasiness of head; complains of debility; arrow-root for diet. Continue powders and cold affusion.

22nd, Considerable headache again to-day; pulse

85; skin cool; bowels not open. To have a saline cathartic. Vespere, Repeated blisters to the temples.

23rd, Bowels well opened; no pain of head; complains of debility, however; this afternoon, headache and great heat of skin returned.

24th, Slept well; tongue clean; bowels not sufficiently open. Haust. magnes. sulphat c. sodæ sesquicarb; no mercurial action. Omit the powders.

25th, Has no complaint this morning. Low diet continued.

26th, Feels tolerably well; has slight cough, and pain in the right shoulder. Hydr. chlorid. ℈j. et postea Ol. ricini ℥j. Quininæ disulph. gr. iij. ter in die.

27th, Vertigo returned again. To have the saline diaphoretic mixture.

28th, Feels better; tongue clean; skin moist.

30th, Not so well. Low diet agrees remarkably well with this complaint; all deviations from it causing an increase of headache and restlessness.

Oct. 3rd, Continues improving. Haust. magnes. sulphat. c. sodæ sesquicarb. to be administered daily.

5th, Vertigo and pain of head return at once if the antiphlogistic treatment be not strictly adhered to.

9th, Quininæ disulphat. gr. v. bis in die.

14th, Discharged to duty.

Case 23. Mr. Cyrus Wakeham, æt. 45, purser; of nervous temperament, tall and slight; had totally abstained from wine and spirits for many years; had served in most parts of the world; had been to the North Pole, to the West Indies and coast of

Africa ; had had yellow-fever three years ago in the Island of Ascension. He has usually enjoyed good health, seldom requiring even a dose of medicine.

Sept. 17th, Had been on deck during the morning till 2 P. M. purchasing provisions from the natives (at Mount Stirling) for the use of the vessel. During this time the sun was very hot indeed through the awnings, which were spread all over the ship. Soon after coming below he stated that while on deck he felt a peculiar sensation of numbness creeping from his back and loins down the thighs, with a feeling of great debility; bowels open; skin rather hot and dry; no nausea or other feeling of indisposition.

℞ Hydr. chlorid. ℈j. et postea Ol. ricini. ℥j.

10 P.M. All uneasiness of the back subsided; but he has now headache and flushed face; skin covered with perspiration. The head to be shaved and evaporating lotion to scalp.

℞ Hydr. chlorid. gr. v. c. pulv. Jacob. veri gr. iij. tertia quaque hora.

18th, Slept during the night, and says he is well this morning, except that he has a feeling of great debility; the tongue is rather dry and brownish; skin covered with perspiration; bowels open. Continue powders.

19th, Slept well, but is feverish and thirsty; skin hot, head intensely so; face flushed and eyes suffused; tongue dry and brown; nausea and vomiting of bilious matter; complains of pain over the region of colon and ileum. Cucurbit. cum ferro accommod. et postea empl. lyttæ p. aff. Continue powders. Afternoon, feels much better; bowels not open. Pil. cathart. stat. Vespere, Medicine operated well, and he now feels better, but complains of thirst. Soda water occasionally.

20th, Slept during the night, and is much improved; tongue moist. Calomel and James's powder continued. 4 P.M. Some sensation of creeping returned from the back down the legs, with a feeling of tightness of the forehead, as if surrounded by a cord, also return of headache. Empl. lyttæ nuchæ capitis. Vespere, Bowels open; urine passes freely, but is very high coloured.

21st, Slept at intervals, but has recurrence of fever this morning; tongue coated but moist; also nausea and vomiting of bilious matter of a greenish colour; gums red, mouth emits a slight mercurial fetor. Omit the calomel.

22nd, Comatose during the night, and his ideas seem to-day completely confused; he is delirious, with yellowness of the skin and conjunctiva, and dropping of the upper lid, the eye remaining half open; skin cool; pulse 160; mercurial odour of breath continues; bowels not open since last night. Magnes. sulph. ʒvj. c. sodæ sesquicarb. et acid. tartaric. This draught was immediately rejected from the stomach, when I gave a purgative pill, which was retained, and being followed by a Seidlitz draught, it speedily emptied the bowels.

23rd, The heat of skin again most intense to-day; the intervals of sleep disturbed by all kinds of disagreeable dreams; pulse 120, very feeble; tongue cleaning, and becoming red and dry at the tip and edges. A Seidlitz draught again to-day to keep up a free discharge from the bowels, the fæces being very black and offensive; complains of a burning sensation at the pit of the stomach. Applice cucurbitula sicca et postea empl. lyttæ scrob. cordis et nuchæ capitis. Soda-water and Seltzer water for drink. Vespere, The intense heat of skin has continued all day, and would appear unquenchable, cold lotions and cold sponging availing nothing; bowels open thrice to-day; no pain, but feels uneasy; pulse 102; tongue moist and cleaning.

24th, Has been delirious throughout the night; the blisters to the nape of the neck, to the temples and pit of the stomach, repeated; tongue has again become clean, but it is dry and glazed; bowels not sufficiently open. Haust. magnes. sulphat. The blistered surfaces discharged a quantity of gold-coloured serum, which might have passed for pure bile; the surface of the body and conjunctivæ very yellow; towards evening became more sensible, and the great heat of skin subsided. Administered a Seidlitz draught; tongue clean but glazed and dry, except at the tip, which is moist; pulse 100. Camphorated mercurial ointment to be rubbed into the thighs and calves of the legs.

25th, Bowels open; slept very little during the night, but is more cool and quiet to-day; stomach continues rather irritable, soda-water, tea, &c. being rejected; continues wandering, and speaks with difficulty, commencing sentences but being unable to finish them; labouring of the muscles of the abdomen in respiration; pulse feeble and intermitting, about 115. Continue mercurial ointment to the thighs and calves of the legs.

26th, Sleeps at intervals, or lies in a state of stupor; is unable to articulate; considerable fever continues; head still conveys a burning sensation to the hand; cold lotions continued; fæces pass involuntarily; great labouring of the abdominal muscles in respiration; singultus. Mercurial ointment continued. Soon after midnight (at 1 A.M. on the 27th) respiration ceased.

Remarks.—This was one of the most severe and remarkable cases which occurred in the vessel, nothing appearing to alleviate the fatal tendency of the disease from the first. The history of the case would plainly indicate the malady to take origin in the nervous system, and from thence to affect the vascular. I regret that circumstances prevented any necrotomic examination, the ship being crowded with sick.

CASE 24. John Osborn, æt. 25, corporal of marines; tall, slight, of bilious temperament; had served six years in the Mediterranean.

Sept. 16th, at the confluence. Vespere, Complained of being unwell, with headache,—also of stiffness and uneasiness of his joints, when he had a cathartic.

17th, Said he was quite well, and went to his duty ; however, on the evening of the 18th a recurrence of the headache and former symptoms took place, when a cold lotion was applied to the head, and pills of calomel and James's powder exhibited every four hours.

19th, Sent down the river in the Soudan at his own request.

Case 25th, George Garritte, æt. 22, third engineer ; plethoric, of phlegmatic temperament ; never before out of England.

Sept. 19th, At noon, complained of headache, rigors, hot skin, confined bowels, nausea, pain of back and joints generally. Caput abradatur et lotio evaporans assidue applicetur. Haust. emetic. statim et postea pil. colocynth comp. ij. et repetantur quarta quaque hora donec alvus rite soluta fuerit.

20th, Skin cool ; feels greatly better ; tongue white ; bowels open. Noon, Recurrence of fever, with headache. Cold lotion continued, with saline diaphoretic mixture.

21st, Headache and heat of skin severe ; bowels open. 10 A.M. Administered the first dose of Dr. Warburg's fever-drops according to his directions, following it up with a second dose at 1 A.M.

22nd, Slept tolerably well ; feels better ; face flushed and tumid ; bowels confined. Haust. magnes. sulphat. c. sodæ sesquicarb. Vespere, Has been restless and uneasy all day ; bowels open.

23rd, Face looks livid and bloated ; complains of thirst and irritability of stomach, with vomiting of greenish bilious matter. Soda draughts occasionally, also diaphoretic mixture, with a blister to the epigastrium.

24th, Complains of considerable vertigo and uneasiness ; stomach quiet. Vespere, Great restlessness and splitting headache have supervened. Blisters to the temples.

25th, Skin hot ; tongue coated ; bowels confined. Haust. magn. sulph. c. sodæ sesquicarb. et acid. tartaric. in impetu effervescentiæ capiend.

26th, Is rather better ; bowels open.

27th, Complains of vertigo and restlessness ; tongue white but moist. Diaphoretic mixture as before.

28th, Skin cool ; slept tolerably. Repeat the saline aperient.

29th, Better, but bowels very costive, requiring a repetition of aperient medicine to obtain sufficient discharges.

30th, Vespere, Some return of fever again tonight.

Oct. 1st, Vertigo continues, especially on the least motion ; bowels confined ; blisters to the temples. Haust. magn. sulph. ut antea. Takes arrow-root occasionally.

3rd, Sleeps well and continues free from fever, but still complains of his head. Repeated blisters.

5th, Quininæ disulphat. gr. iij. bis in die.

7th, Head rather better. Takes quinine and wine; cold affusion to the head daily.

10th, Walks about, and is convalescent.

23rd, Discharged to duty.

Case 26. Henry Hillier, æt. 23, carpenter's mate, of nervous temperament and healthy appearance; has served two years in the Mediterranean.

Sept. 19th, Last evening complained of rigors, nausea, and pain in the back and limbs generally; an emetic was exhibited, and afterwards a scruple of calomel, followed this morning by a saline aperient. At 8 a.m. he was removed to the Soudan at his own request, for the purpose of being conveyed to the sea.

Case 27. Dr. Theodor Vogel, æt. 30, botanist to the expedition; tall, thin, of bilious temperament and sallow complexion; never before out of Europe.

Sept. 19th, at the confluence of the rivers Niger and Tchadda, felt unwell, with rigors and headache; countenance flushed and tumid; bowels open; tongue rather white; oppression at the epigastrium, and slight cough; pulse 95, and small. Haust. emet. statim.

20th, Passed a restless night, but feels better this morning.

℞ Magnes. sulphat. ʒvj.
Sodæ sesquicarb. ℈j.
Aquæ f℥iv. misce et solutioni adde acidi tartarici scrupulum unum et statim hauriat æger.

Complains of pain of the back, extending down the thighs and legs, so as to prevent their being stretched out.

21st, Sleep disturbed by dreams and startings; headache and extreme prostration continue. Having first exhibited a dose of castor oil, Dr. Warburg's drops were given, the first dose being followed up by a second in three hours, agreeably to the directions. Vespere, Has been sleeping during the afternoon; expresses himself in a state of prostration, and very much debilitated.

22nd, Slept well; complains of headache; face rather flushed; bowels not open. Haust. magnes. sulph. ut supra. Vespere, Complains of thirst and headache; takes soda-water for drink.

23rd, Very restless all night, with return of fever; bowels open. Pil. hydr. chlorid. c. pulv. Jacob. quarta quaque hora sumend.

24th, Seems better this morning. Pills continued.

25th, Considerable return of fever during the night, with great restlessness and thirst; bowels not sufficiently open. Pill continued, with a saline aperient.

26th, Slept well, and is free from fever this morning; feels tolerably well. However, on moving from his bed he fell prostrate on the deck in a state of syncope. Vespere, Great heat of skin, and severe headache have again occurred. Hydr. chlorid. ℈j. tertia quaque hora cap.

27th, Very restless all night; no sleep; towards morning the skin became cool. Calomel continued.

28th, Recurrence of fever and restlessness during the night ; gums swelling and looking red ; bowels open. Continue calomel.

29th, Slept at intervals ; skin more cool ; bowels open ; slight ptyalism.

30th, Pretty well till 2 P.M. when fever again commenced with great restlessness ; tongue coated and dry.

Oct. 1st, This afternoon heat and rigors with headache ensued as before. Empl. cantharidis nuchæ capitis.

℞ Sodæ sesquicarb. ʒj.
Potas. nitrat. ℈ijss.
Aquæ f℥vj. ft. mist. Cap. ℥i. quarta quaque hora.

2nd, Feels better. 10 A. M. Again attacked with fever and headache ; complains of debility, and faints on the slightest exertion. Vesicatoria temporibus.

3rd, No sleep during the night ; pulse feeble ; tongue coated but cleaning ; gums swelled and glazy. Omit the powders. Vespere, Heat of head most intense. Lotio frigida assidue applicanda.

4th, Slept better than on the previous night ; bowels confined. To have a Seidlitz powder.

5th, Rather better ; bowels open ; tongue cleaning, but its papillæ present an enlarged appearance.

4 P.M. Went on shore at Fernando Po at his own anxious request, where he recovered.

CASE 28th, Joseph Graystock, æt. 37; second engineer; plethoric, of broken constitution and phlegmatic temperament; had lived several years in the North of Europe.

Sept. 20th, at the confluence of the rivers Niger and Tchadda, complained of nausea, irritability of stomach and diarrhœa, also of headache and pain of back extending from the loins down the legs; pulse small. Haust. emet. statim. Noon, Face flushed; skin hot. Pil. hydr. chlorid. c. pulv. Jacob. veri quarta quaque hora.

21st, Skin cool; bowels open; tongue coated with white fur; pulse, 95. To have the diaphoretic mixture.

22nd, Some return of fever; bowels not open; headache rather severe. Lotio frigida capiti et haust. magnes. sulph. c. sodæ sesquicarb. et acid. tart. in impetu effervescent.

23rd, Skin cooler than yesterday, but head intensely hot; tongue coated and dry. Lotion and medicines continued.

24th, Great restlessness; tongue dry and brown. Haust. Seidlitz.

25th, Bowels not open; tongue continues brown but is moist; skin cool; very uneasy. To have the saline aperient. Vespere, Recurrence of febrile action; bowels copiously opened.

26th, Fever continued throughout the night;

tongue dry and brown; great restlessness; gums white and glazy. Cold tea and barley-water for drink. Omit the powders. Vespere, Fever less, but the restlessness increased. Empl. vesicatoria nuchæ et temporibus.

27th, Bowels freely open; skin cool; a dull uneasy sensation of the head continues. Vespere, Return of febrile action. Haust. colchici nocte.

28th, Cool to-day; no fever; bowels open; tongue moist; looks much better. Repet. haust. colchici.

29th, Skin cool; very restless and uneasy; pupils rather dilated. Repeat the blisters and draught at night.

30th, Slept tolerably; looks pale; tongue cleaning and moist.

Oct. 1st, Much as yesterday. Haust. aperiens.

2nd, Tongue cleaning; continues to improve.

3rd, Countenance more natural; tongue cleaning; complains of vertigo. Repeat the blisters with cold affusion to head.

4th, Appetite becoming good; continues doing well. Quinæ disulph. gr. iij. ter in die.

6th, Gaining strength; takes ale and wine.

10th, Wine, quinine and ale as before.

16th, Convalescent.

31st, Discharged to duty.

Case 29. Mr. William Bowden, æt. 52, purser of the Albert.

Sept. 20th, Vespere, Was received from the Albert in a state of great debility, having been suffering from fever for the last few days (after exposure to insolation on shore at the Confluence, shooting; and also while in the performance of his duty on board the Albert, having been occupied in the same way as Messrs. Simpson and Terry, whose cases have been already given). The symptoms were those usually present—headache, hot skin, &c. followed by remissions; during the intervals he appeared in his usual health. The effect of the removal from the Albert into this vessel was to produce extreme exhaustion and repetitions of syncope of an alarming character. He had been suffering from diarrhœa for the last two or three days; when received, his tongue was white and his pulse quick and feeble; he had headache and heat of skin. Corpus ægri lotione aceti subinde lavetur, et capiti ejus lintea aquâ frigidâ madefacta sedulo applicentur. Atque in statu infractæ quietis servetur.

21st, 2 A.M. Found him in a state of syncope from diarrhœa; skin cool; pulse scarcely perceptible after recovery. Administered a morphine draught.

9 A.M. Had several hours' sleep after the draught, and is now suffering from reaction, head being intensely hot, with thirst. Aqua panis tosti pro potu communi. The stomach and bowels are constitutionally irritable, and this condition is now so much increased, that the smallest quantity of calomel or James's powder produces nausea and constant diarrhœa; the use of medicine is, therefore, almost

wholly precluded. To have soda-water occasionally. Vespere, Great heat of skin again recurred, with debility and excessive prostration. To have the diaphoretic mixture.

22nd, Slept during the night, and the fever subsided towards morning. Pulv. Jacob. veri gr. ij. tertia quaque hora capiend. also Seidleitz powders to open the bowels, which are confined to day. Noon, Feels comfortable.

23rd, Slept well; skin cool; much as yesterday; bowels open; tongue white; tea and arrow-root for diet. Vespere, Recurrence of fever.

24th, 3 A.M. Fever continues; head intensely hot; great restlessness. Noon, Fever subsided; tongue coated; pulse, 90, soft.

℞ Quinæ disulphatis.
Pulv. Jacob. veri āā gr. ij. m. ft. pulv. ter in die cap.

Vespere, Return of fever. Omit the quinine. Haust. morphiæ mur. statim. Soda and Seltzer water for drink.

25th. Did not sleep much, but felt quiet and comfortable; bowels not open. To have a Seidlitz powder.

26th, Last night fever returned, with great restlessness and headache. James's powder continued. Repeat the Seidlitz powder, also the morphia draught at night.

27th, Had no sleep during the night, but feels better this morning; skin cool; tongue cleaning. Seidlitz as yesterday. Vespere, Fever returned again with violence.

28th, Has not slept during the night, and is to-day very much exhausted; bowels confined. Repeat the Seidlitz.

29th, Feels better to-day, and is free from fever.

30th, Some fever returned during the night, but less severely, and he is better to-day. Continue the Seidlitz powders.

Oct. 1st, Continues cool, quiet and comfortable; bowels open; takes broth, arrow-root, and a little ale.

2nd, Much as yesterday; slept well, and is free from fever.

3rd, Continues rather improving; complains of debility.

4th, No bad symptoms to be discovered; countenance looks well; tongue rapidly cleaning; pulse slow, rather feeble; skin cool; sleeps at night, but not soundly; has a little vertigo; bowels open. Takes arrow-root and chicken-broth.

6th, Towards evening some recurrence of fever took place, but it subsided towards morning. Quininæ gr. iij. bis in die.

7th, Again better to-day; tongue moist. Haust. Seidlitz.

10th, Goes on favourably. Quinine as before.

12th, Tongue clean; appetite good. Haust. magnes. sulphat. c. sodæ sesquicarb. et acid. tart.

14th, Convalescent.

17th, Discharged to duty.

Case 30, Mr. G. B. Harvey, æt. 32, master of the Albert; had been ill some days.

Sept. 20th, Received about 3 P.M. from the Albert in a state of great exhaustion; the skin in the morning had been very hot, and the patient had suffered from severe headache; but these symptoms are now relieved. Head to be shaved and evaporating lotion applied; bowels open. Vespere, Return of fever; pulse feeble, 108; restless; thirst; tongue has the usual appearance in the advanced stage, clean in the centre, coated towards the edges; has slight diarrhœa.

℞ Hydr. chlorid. gr. iij. c. pulv. Jacob. veri gr. iij. tertia quaque hora capiend.

21st, Has been restless during the night and delirious, talking in his sleep; towards morning this condition subsided, and he again felt comfortable. Empl. lyttæ nuchæ capitis. Cold lotion continued.

22nd, Restless; wandering during the night, with remission this morning; bowels open; tongue clean. Continue powders.

23rd, Feels more comfortable to-day; slept at intervals during the night; skin cool. Continue powders. Vespere, Skin covered with perspiration; bowels open.

24th, Very restless during the night, with return of fever and great thirst. Soda draughts occasionally. Continue powders; gums slightly swelled but pale; no mercurial fetor. Vesicatoria temporibus applica.

25th, Slept during the night, but disturbed the other sick people by frequently crying out; is very irritable, complaining of trifles. Repeat blister to the neck; tongue is clean, but swelled and tremulous; the pulse undulates, and recedes from the surface.

26th, Had fever through the night. Continue powders.

27th, Tolerably calm to-day; tongue clean and tremulous as before; bowels open.

28th, Free from fever. Quinæ disulphat. gr. v. ter in die, with arrow-root and wine. This afternoon singultus came on, and continued for a considerable time. Vespere, Haust. morphiæ.

29th, Slept tolerably. Quinine and wine continued. Singultus occasionally throughout the day.

30th, Does not look so well; face pale and sunken; skin yellow. Singultus very troublesome. Arrow-root, wine, &c. Tongue clean and red; startings of the tendons of the extremities; inability to raise the hands.

Oct. 1st, Continued during the night and all through the day much as he was yesterday. Singultus continuing, with subsultus tendinum; urine and fæces passing involuntarily. Takes arrow-root and wine.

2nd, Slept occasionally during the night, when the singultus ceased; but it came on again when he awoke; gradually sinking all day till 8 P.M. when respiration ceased.

CASE 31. Mr. Horatio Collman, æt. 36, assistant-surgeon of the Soudan.

Sept. 20th, 3 P.M. Was received from the Albert, having about noon whilst on shore been suddenly seized with headache, sense of great prostration, &c. On being received, his face was flushed ; skin hot ; pulse quick ; tongue whitish, rather clean ; evaporating lotion to the scalp ; bowels not open.

℞ Hydr. chlorid. ℈j. et postea magnes. sulph. ʒvj. c. sodæ sesquicarb. et acid. tartaric. in effervescentiæ impetu.

21st, Slept during the night, and has a remission to-day ; is in better spirits than yesterday ; bowels open.

℞ Pulv. Jacob. veri.
Hydr. chlorid. āā gr. iij. quarta quaque hora.

The face looks tumid and flushed, but is quite cool ; there would seem to be congestion of the system, rather than high action ; tongue thickly coated and white ; fever returned towards evening.

22nd, Lies quiet ; complains of no pain, simply of exhaustion ; bowels open. Continue powders. Haust. magnes. sulph. c. sodæ sesquicarb. Vespere, Skin hot, but covered with perspiration.

23rd, Slept well ; skin cool ; face continues tumid, but cool and moist ; tongue foul. Continue powders, with effervescing draughts occasionally.

24th, Considerable return of fever last night. Continue powders ; stomach irritable. Empl. lyttæ scrob. cordis. Vespere, Bowels not open. Haust. magnes. sulph.

25th, Slept well; bowels open; skin cold and clammy.

℞ Quinæ disulph. gr. v. bis in die.

26th. Considerable fever, with headache and restlessness. The calomel increased to scruple doses every two hours.

27th, Slept well; has no fever to-day; bowels open; the discharges consisting of biliary fæculent matter. Powders as above.

28th, Fever again occurred last night; had very little sleep; however, to-day the skin is cool, the tongue coated, white and clammy; the pulse feeble. Calomel continued as above.

29th. The skin is to-day cool, and the pulse excessively feeble. To have a few spoonfuls of arrow-root and wine. The papillæ of the tongue swelled and rough; mouth clammy. Haust. Seidlitz. The gums swelled but shining. Omit the calomel.

30th, Fever returned again last night, but has subsided to-day; bowels open; to have some arrow-root and wine; tongue more moist, and cleaning in the centre; no appearance of mercurial action on the gums, except a white glazy look.

Oct. 1st, Continues much as above; lies quiet with a cool skin, but the face looks anxious; tongue clean in the centre, but the papillæ on its surface are enlarged. Arrow-root and wine, with saline draughts occasionally, and quinine as before.

2nd, Pulse very feeble; slept during the night;

skin cool. Arrow-root and wine. Fæculent biliary discharges from the bowels.

3rd, Countenance changed since last night, being sunken and yellow, with dropping of the upper eyelid and under jaw; lies quiet, being scarcely capable of articulating; pulse feeble; tongue dry with accumulation of sordes about the teeth. Strength supported by wine and arrow-root.

4th, Continues as yesterday. Takes arrow-root and wine occasionally.

5th, Lies in a comatose state, with singultus and nervous twitchings occasionally; considerable labouring of the abdominal muscles in respiration. 12 P.M. Died.

Remarks.—In this case there was generally a more or less perfect remission of the fever during the day, but towards evening it returned with unabated violence, accompanied with delirium. The febrile condition seemed to be increased by the use of quinine, and even by arrow-root in the smallest quantity. In fact every deviation from the strictest antiphlogistic plan was attended by injurious consequences.

CASE 32. William Martin, æt. 29, corporal of sappers; a remarkably stout muscular man; had served a short time in Bermuda, and several years in Gibraltar.

Sept. 21st, at the confluence of the rivers Niger and Tchadda, was seized last night with rigors, hot skin and severe headache. Tonde capillos et applica lotionem frigidam capiti. The surface to be sponged with vinegar and water. Haust. emet. statim. This morning a dose of castor oil was exhibited, and afterwards Dr. Warburg's drops, followed by a second dose in three hours. Vespere, Drowsy, hot skin, pulse sluggish.

22nd, Feels better; but complains of a dull heavy pain in his head, with sense of languor and debility; countenance tumid and purple; bowels confined. Haust. magnes. sulph. et sodæ sesquicarb.

23rd, Bowels confined. Repeat the saline aperient. Evening, Pulse quick; tongue white; head more painful.

24th, Bowels open during the night; complains of vertigo, and a dull heavy feeling in the head.

25th, Very restless. Empl. vesicatorium nuchæ. Repeat the saline aperient.

26th, Slept better, and is more free from fever to-day; head not quite so painful.

27th, Cold affusion to the head. Quinæ disulphat. gr. iij. ter in die.

28th, Feels much better. Quinine continued.

29th, Discharged to duty.

Case 33. Richard Smitheys, æt. 21, gun-room steward; tall, slight, of nervous temperament, healthy appearance; had served several years in the West Indies, South America, and the Mediterranean.

Sept. 23rd, at Eboe, 3 p.m. complained of headache, hot skin, and nausea, with slight cough, and stiffness of the limbs. Haust. emetic. statim et postea haust. magnes. sulph. c. sodæ sesquicarb. et acid. tartaric. in impetu effervescent. Vespere, Stomach quiet. Abrade caput et applica lotionem frigidam.

24th, Much better to-day; skin cool ; some return of headache on going to bed; bowels open. Administered Dr. Warburg's drops—repeating the dose in three hours.

25th, Slept tolerably, and has less of fever this morning, but complains of great uneasiness in his head and of nausea; tongue foul and sour taste in his mouth; bowels not open. Repeat the saline aperient.

26th, Return of fever last night, with splitting sensation behind the orbits ; is very restless; bowels not operated on. Repeat the saline aperient.

27th, Slept better last night, and is cool; bowels open. Vespere, Return of fever. Evaporating lotion to the head continued, with a blister to the nape of the neck.

28th, Much better to-day; tongue coated.

29th, Fever returned last night, and continued till 6 A.M. this morning; skin is now cool, and bowels open.

30th, Tongue cleaning ; pulse rather slower and fuller. Repeat saline aperient.

Oct. 1st, Slept better, and is free from fever to-day.

2nd, Vespere, Became very restless, with headache and thirst. Repeated the saline aperient.

4th, Skin cool ; tongue clean ; face pale, with vertigo. Blister to be repeated to the nape of the neck.

6th, Sleeps tolerably; skin cool and moist. In the afternoon however, he was again suffering from fever.

8th, Skin hot; face pale; bowels open; tongue clean.

10th, Was affected with heat of skin and headache as before. To have a saline aperient and soda draughts occasionally.

12th, Is free from fever, but very restless; complains of vertigo, and intolerance of light. Blisters to be applied to the temples and nape of the neck. Quinæ gr. v. bis in die.

14th, Countenance pale; scalp very hot; tongue clean; bowels confined; very restless. Ol. ricini ℥j. Quinine continued.

16th, Is rather better. Quinæ gr. viij. bis in die.

20th, Sleeps well; is improving daily; complains of debility and weakness of his legs. Takes wine and ale.

25th, Is able to walk. Quinine, wine, &c. continued.

31st, Discharged to duty.

Case 34. George Cuthbertson, æt. 38, sergeant of marines, a strong, well-made, muscular man, in robust health, of the bilio-sanguineous temperament, with blue eyes; had served both in the East Indies and the Mediterranean; had been employed on board with the purser purchasing provisions from the natives for many days, when he was much exposed to insolation.

Sept. 26th, Inside the bar of the Nun River, about four o'clock in the morning, was affected with rigors, coldness, &c. followed by headache and a hot skin; when the head was shaved and an evaporating lotion applied to the scalp. Exhibe haust. emetic. statim et postea hydr. chlorid. ℈j. Vespere, Skin continues hot; back and limbs uneasy.

℞ Magnes. sulph. ℥j.

27th, Slept badly, but is better to-day; bowels open four times during the night; tongue white.

℞ Hydr. chlorid. gr. v.
Pulv. Jacob. veri gr. iij. m. ft. pulv. tertia quaque hora cap.

28th, Tongue covered with a thick coat; towards noon, recurrence of fever took place, the face being tumid and red; pulse, 102, without hardness. Hydr. chlorid. ℈j. tertia quaque hora.

29th, Fever subsiding this morning; gums slightly red and swelled; mouth filled with saliva; tongue yellowish and slimy. Omit calomel. Haust. magnes. sulph. c. sodæ sesquicarb. et acid. tart. in statu effervescentiæ ipso sumendus.

30th, Ptyalism; face looks red but is quite cool; tongue thickly coated and moist; bowels open; nausea and vomiting of greenish bilious matter. Soda draughts occasionally.

Oct. 1st, Profuse ptyalism, but notwithstanding which, the fever returned towards evening, accompanied with delirium, the scalp being intensely hot. Empl. cantharidis nuchæ; lotio frigida capiti assidue applicanda; habt. quoque haustus salinus aperiens.

2nd, Fever subsiding this morning; bowels several times open during the night; on moving out of his hammock he immediately fell down in a state of syncope; the tongue remains covered with a thick fur, and is moist; face and head very hot. Ptyalism continues.

3rd, Delirious during the night, but is better to-day; mouth very sore. Gargarismus aluminis sæpe utendus.

4th, Slept at intervals; wandering during the night; is free from pain; face cool but red and bloated, indicating no action, but seemingly congestion.

5th, Ptyalism continues with slight hemorrhage. Headache mitigated; tongue thickly coated and brownish, but continues moist. A Seidlitz draught immediately. Gargle to be used occasionally.

6th, Sleep disturbed by dreams; fever returned this morning; bowels open. Soda draughts occasionally. Blisters to the temples, and one to be repeated to the nape of the neck.

7th, Slept at intervals; tongue moist and cleaning; bowels open; pulse 95, sluggish; ptyalism subsiding. Quininæ gr. v. ter in die.

8th, Has no pain, but is restless; some heat of skin returned towards evening. Ol. ricini ℥j.

9th, Tongue cleaning; fever less urgent. Soda draughts occasionally; quinine continued.

10th, Slept well, and looks better to day; tongue clean; no appetite; face cool; pulse sluggish. Quinine as before.

4 P.M. Countenance become pale, but still looks well; extremities cold; pulse scarcely perceptible. Balneum calidum statim adhibendum; habeat ammon. sesquicarb. gr. viij., ex uncia una vini Xerici. The patient never rallied, and life became extinct at 8 P.M.

Remarks.—In this case profuse ptyalism occurred, commencing on the fourth day of the disease; after which I considered him perfectly safe. But the action of the mercury appeared to have no influence upon the malady, which went on unabated in severity, and finally destroyed the patient on the 15th day.

CASE 35, Henry Rosemergy, æt. 21, private of sappers; nervous temperament and healthy appearance; never before out of England.

Sept. 26th, inside the bar of the Nun River, 2 P.M. Complained of rigors and coldness, after which headache and heat of skin supervened, with a peculiar sense of numbness in the limbs. Haust. emet. statim. Vespere, Hydr. chlorid. ℈j.

27th, No sleep during the night; skin cool; bowels freely open. Noon, Administered Dr. Warburg's fever drops, repeating the dose in three hours.

28th, Feels better; is cool; tongue coated; pulse quick and small. At noon, a recurrence of febrile action took place, with wandering and delirium.

29th, Fever subsided at 6 A.M.; very restless, with uneasy sensation in the head; bowels confined. Ol. ricini ℥j. Lotio evaporans capiti assidue applicanda.

30th, Bowels open; towards evening the headache and febrile action again became severe, and the stomach irritable. Soda water for drink. Applica cataplasma sinapis epigastrio.

Oct. 1st, Skin cool; tongue slightly red in the centre; bowels not open. To have a saline aperient.

2nd, Slept very little during the night; tongue dry; face pale; pupils dilated. Vesicatoria nuchæ et temporibus admove. Discharges from the bowels thin and bilious.

3rd, Much as yesterday; some wandering and delirium during the night.

4th, Tongue dry; countenance pale and anxious; bowels open. Repeat blister to the nape of the neck.

5th, Slept tolerably, and looks better to-day; tongue becoming clean in the centre.

6th, Restless and thirsty during the night; tongue dry and brown in the morning, becoming moist at noon, and again brown and dry at night.

7th, Fever continues at intervals; bowels open; tongue dry. Saline draughts occasionally, and a morphine draught at night.

8th, Slept well; tongue more moist; pulse slower and fuller.

9th. Much as yesterday. Ol. ricini ℥j. Quininæ gr. v. bis in die et Haust. morphiæ nocte.

10th, Is rather better; tongue clean and red in the centre; bowels operated on by the castor oil; has an abscess forming in the right side of the neck. Apply a cataplasm to the part.

12th, Doing well; tongue moist. Takes a saline aperient occasionally; also quinine and the morphia draught at night.

13th, Free from fever; right cheek increasing in size, and very painful; appetite good; skin cool; tongue moist. Medicines continued; cataplasm to the cheek.

16th, Tongue become clean and moist; bowels regular. Opened abscess of cheek.

20th, Continues improving. Medicines continued.

Nov. 4th, Discharged to duty.

This was the last case of fever that occurred in the river Niger. But the influences which were potent in engendering the formidable disease with which we had to contend whilst in the stream, were still at work, as will plainly appear by the following cases, the particulars of which I subjoin.

Case 36. Mr. W. T. H. Green, æt. 23, second master; of bilio-sanguineous temperament and healthy appearance; had served five years in the West Indies and two years on the coast of Africa, and had suffered severely from fever on both stations.

Sept. 30th, at sea near Fernando Po. ; complained of having had a bad head-ache and of feeling unwell for several days, after exposure to the sun while up the river making observations on shore. He had taken a dose of calomel and of opening medicine daily, but in consequence of the pain in the head becoming very severe, he was now unable to do his duty.

The head was hot; tongue clean ; pulse feeble and rather quickened ; bowels open. Abrade caput et lotionem frigidam admove ; admoveantur quoque emplastra vesicatoria nuchæ et temporibus.

Oct. 1st, Better this morning ; considerable discharge from the blistered surfaces ; sleep last night disturbed by disagreeable dreams. Afternoon, The pain of the head has come on as bad as before ; face pale ; some intolerance of light ; pulse 98, quicker and more feeble than yesterday. Hydr. chlorid. ℈j. quarta quaque hora.

2nd, Slept soundly ; pain of head less, it being now a kind of numbness across the temples ; gums red and swelled. Haust. magnes. sulph. c. sodæ sesquicarb. et acid. tart. in impetu effervescentiæ. Soda water occasionally.

3rd, Profuse ptyalism this morning ; during the night the pain of the head left him, when a creeping from his loins down his thighs and legs to the ankles supervened. All his joints are now stiff. 6 A.M. Says he feels very well ; however, in about two hours an attack of rigors, heat of skin, &c. came on, accompanied with restlessness.

4th, Continues restless and uneasy, and affected with headache; mouth sore; considerable ptyalism. Repeat blisters to the neck. To have a saline aperient and the alum gargle.

5th, Sleep disturbed by startings; headache severe again to-day; ptyalism continues.

6th, More comfortable; face livid and cool; tongue moist and slimy.

7th, Considerable heat of skin and headache, with irritability of stomach ; vomiting of dark-green bilious matter took place about noon to-day ; bowels open. Soda water for drink, gargle to be used occasionally. Vespere, Some hemorrhage from the gums.

8th. Feels better; irritability of stomach subsiding ; skin and conjunctiva yellow. At noon, fever again came on, with a hot dry skin and great restlessness ; mouth better. Ol. ricini ℥j. Blisters to be repeated to the neck and temples.

9th, Skin again very hot to-day ; with return of the irritability of stomach. Soda draughts every four hours.

10th, Slept well, and is free from fever to-day ; ptyalism subsiding, and the stomach returning to its proper state of quiescence. Quininæ gr. v. bis in die.

11th, Is better, but some irritability of stomach continues. Haust. morphiæ nocte.

12th, Appetite returning ; pulse 85 ; tongue clean. Ol. ricini. ℥j. Quinine continued.

14th, Convalescent ; takes wine, ale, quinine, &c.

25th, Discharged to duty.

Case 37. Lieutenant E. G. Fishbourne, æt. 29.

Oct. 7th, at Fernando Po. Vespere, Received from the Soudan, having been affected with fever since the 1st of the month. When received, his face was flushed, and there was great heat of scalp and skin generally ; tongue whitish, the papillæ raised and swelled ; some delirum ; had been taking calomel, which had slightly affected his gums. To have the saline diaphoretic mixture ; an evaporating lotion to be applied to the head.

8th, Slept tolerably ; skin cool and moist ; pulse quick but soft ; vertigo. Ol. ricini ʒvj.

9th, Free from fever to-day ; tongue covered with white fur ; bowels once open. Mistura salina quarta quaque hora capienda.

10th, Slept tolerably ; bowels not open. Ol. ricini ʒvj. Soda draughts occasionally ; complains of a dull heavy pain of the head. Quininæ gr. v. bis in die.

11th, Continues going on well ; bowels open ; tongue cleaning ; appetite good.

12th, Sleeps well ; takes aperient medicine daily, with quinine.

14th, Appetite good ; looks well ; walks about.

17th, Discharged convalescent.

Case 38. William Johnson, æt. 29, first engineer ; tall, slight, of nervous temperament ; had been two years in India.

Oct. 9th, at Fernando Po. Had not slept during the night, having been very restless, and suffered from headache and great heat of skin; is affected with diarrhœa; complains of numbness and stiffness of his hips and knees. Haust. emet. statim; et postea ol ricini ℥j. Vespere, Headache continues; tongue white. Lotio frigida capiti.

10th, Slept tolerably, and is cool this morning; irritability of stomach present, with vomiting of bilious matter. Soda draughts occasionally.

11th, Slept well; skin cooler than yesterday; less irritability of stomach. Ol. ricini. ℥j. 3 P. M. Fever greatly increased; pulse quick and feeble; tongue white and coated; bowels three times open, the discharges of a bilious character; towards evening became somewhat delirious.

12th, Slept well, and expresses himself much better. Haust. magnes. sulph. c. sodæ sesquicarb. et acid. tart. Vespere, Fever has again increased, but is less urgent than yesterday.

13th, Towards morning the fever subsided, and he is now tolerably cool; complains of vertigo.

14th, Is rather better; bowels open; tongue cleaning. Quininæ disulphat. gr. v. bis in die.

16th, No fever since the 13th, tongue clean; pulse more full. Takes quinine and wine.

18th, Walks about, and is convalescent.

22nd, Discharged to duty.

Case 39. Mr. H. C. Toby, æt. 24, acting lieutenant; was discharged to duty on the 21st of October last perfectly recovered from fever; since that time he has grown remarkably stout and florid, and expressed himself as being in perfect health.

Nov. 11th, at sea, between the islands of Anno Bon and Ascension, complained of severe rigors and coldness, spreading from the back and loins, on getting up in the morning; bowels regular; tongue rather white; no appetite. Hydr. chlorid. ℈j. statim et postea ol. ricini. ℥j.

12th, Got up as usual to-day, but before noon felt very unwell. Stomach exceedingly irritable, every thing being rejected. To have effervescing draughts of carbonate of potass and citric acid every four hours. Bowels not properly evacuated. Pil. colocynth. comp. ij. nocte.

13th, Slept tolerably. Haust. sulph. magnes. primo mane. Noon, Bowels freely open, after which he felt much better.

14th, About noon great heat of skin came on, with irritability of stomach, and vomiting of bile; bowels freely open. Vespere, Delirious. Lotio evaporans capiti.

℞ Hydr. chlorid. gr. ij.
Pulv. Jacob. veri gr. iij. quarta quaque hora.

15th, Very restless during the night, and great heat of skin to-day. Noon, Wandering, and talking incoherently. Powders continued, with soda draughts occasionally.

16th, Slept well; skin cool; pulse 90, soft; stomach very irritable. Cataplas. sinapis epigastrio; effervescing draughts occasionally.

17th, Irritability of stomach continues. To take nothing but a little arrow-root or tea. Empl. vesicatorium scrobic. cordis.

18th, Slept tolerably ; skin cool ; pulse soft, 90 ; tongue white. Haust. magn. sulph.

19th, Rather better, but is low-spirited ; tongue becoming clean. Quinæ disulph. gr. iij. bis in die.

20th, Appetite improving ; bowels kept regular by the use of saline aperients.

29th, Discharged to duty.

At Ascension new cases of fever having ceased to arise, and all the old ones having recovered, I shall take the opportunity of reviewing briefly the circumstances in which we had been placed from our arrival at Iddah to our making the Island of Ascension.

On arriving at Iddah, then, towards the end of August, 1841, (260 miles from the entrance of the river,) the ship was enjoying a greater immunity from disease than during any previous period since she had been commissioned. At this time all seemed favourable ; and when we contrasted our position on board with that of the natives in their wretched huts, in which they nevertheless lived free from any disease, we could not but believe that we were safe.* This promised security, however, only proved a lull before the storm, for on the 4th of September, one case of fever was put upon the sick list, on the next day another, and from this time they increased so rapidly, that on the 21st of the month we had about thirty patients in their hammocks, besides five who, with all the sick from the Albert, had been sent down the river to the sea in the Soudan a few days previously. The number of sick, indeed, appeared to be increasing so fast, that it was now thought necessary the vessel should proceed down the river to the sea without loss of time.

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* On the afternoon of the 6th of September I visited Iddah, on occasion of the king's entering into a treaty with England for the suppression of the traffic in slaves. The road from the landing place to the audience chamber was about two miles long, mostly

On leaving the confluence, in addition to our own sick, we received from the Albert, Mr. Bowden, purser of that vessel; Mr. Harvey, master, and Mr. Collman, assistant-surgeon of the Soudan, who had been left as medical attendant to the model farm erecting at the confluence. These officers were all suffering from fever in its most dangerous form. After reaching Fernando Po, we also received

a narrow, rugged pathway, with tall grass and reeds on either side. At length we reached the residence of the late king's sister, through whom all communications to his present Majesty are made. The princess we found seated in state in a mud hut, to arrive at which, we had to pass through numerous rat-holes or door-ways, and winding passages. After having nearly broken our backs with stooping, we were finally ushered under a clay cone, where the shining countenance of the nearly naked princess became visible.—It was really a curious sight to see the white faces of the British naval officers in their uniforms mingled by torch light with the jet black sleeky countenances and ebony limbs of the court of Iddah!

on the 7th of October Lieutenant Fishbourne, of the Albert, who had come down the river in command of the Soudan, and was now suffering a smart attack of fever. This officer recovered, and returned with Mr. Bowden up the river in the Pluto to rejoin the Albert.

Before leaving the confluence two fatal cases had occurred (one a seaman, the other a sapper and miner). On our way down the river Mr. Wakeham, the purser, died; at Fernando Po, Mr. Harvey, Mr. Collman, and a stoker fell victims; at Prince's Island, the sergeant of marines, and, finally, at the island of Anno Bon, a seaman, died in succession. The last patient had had a severe attack of fever up the river, and had been discharged to duty perfectly well before leaving the confluence. He continued in good health for a fortnight; he then suffered from ague; and two or three weeks afterwards he was again placed in the "list," complaining of febrile attacks at night, of loss of appetite, and general indisposition, with debility; he was suddenly affected with stupor and apoplectic symptoms, from which he rallied for a short time, and then finally sank.

On leaving the confluence on the 21st of September, the master, purser, mate, clerks, engineers, stokers, marines, and seamen, with all the "savans" of the expedition, viz. the botanist, geologist, and zoologist, also two commissioners' clerks, being all severe sufferers, the ship may truly be said to have formed a floating hospital.

Captain Allen was also attacked at this time, but in his case the disease was not of the most severe kind.

Before we reached Ascension, I believe that every European in the vessel, with the exception of five, viz. Lieutenant Strange, Commissioner Cook, myself, one of the carpenter's crew, and the midshipmens' steward, had suffered from fever. Two more escaped, indeed, the Messrs. Thomson and Stirling, assistant-surgeons, who had gone down the river in charge of the patients embarked in the Soudan. If they be added to the list of those who did not suffer, we shall still have no more than *seven* out of *sixty-two* who escaped!

On proceeding up the river on the 20th of August, the ship's complement consisted of

Officers	13
Seamen	27
Marines	9
Sappers	4
Supernumeraries	9
Whites	62
Kroomen & coloured people	44
Total	106

The weather during the whole of the month of August was cloudy, with more or less of rain every day, generally showers, between which the weather was fine. The average heat was 78° ; the maximum being 85°, and the minimum, 73°.

In September, the first few days were rainy, with thunder and lightning; between the storms the heat was very great. We had by this time reached Iddah, where the sickness began. The weather now became very fine and intensely hot till the 21st when we left the confluence, the heat in the shade on this day being 90° at noon. As we approached the delta of the river on our way down, we experienced heavy showers, and the heat was much less oppressive. The average temperature of the month was 84°; the maximum, 90°; the minimum, 72°.

On the 1st of October we arrived at Fernando Po from the confluence. Here we remained till the 9th. We then proceeded to Prince's Island, to the Island of St. Thomas, and lastly, to Anno Bon, where we anchored on the 27th. On the 5th of November we left Anno Bon for Ascension, and made the island on the 17th, by which time the people had completely recovered.

The Wilberforce continued at Ascension till the 10th of March, 1842, when she again proceeded to Fernando Po, calling at Cape Coast Castle. About the period of our return to the coast, we had again eight cases of fever (secondary attacks), all of which speedily gave way to appropriate treatment.

In the early part of the month of May (1842) the vessel being employed surveying the river Cameroons, some cases of fever again arose. The brief histories of three of these will best show the nature of the disease as it appeared upon this occasion.

Case 40. Mr. C. G. Roscher, æt. 27, geologist.

May 8th, 1842, at King Bell's Town, complained last evening after coming off from the shore of lassitude, headache, pain of the loins and legs, and constipated bowels. A dose of croton oil was exhibited. 10 a.m. This morning, found him lying down suffering from severe headache, with the head intensely hot; pain of joints generally; quick pulse; great thirst; white tongue; bowels freely open; stomach irritable. Haust. salinus effervescens c. sp. æther. nit. ♏ xxxx. tertia quaque hora. Vespere, Rather better; head and skin cooler.

℞ Tinct. colch. ♏ xxxv.
Sol. morph. mur. ♏ xxx.
Aquæ f℥j. m. ft. haust. hora somni sumendus.

9th, Very restless during the night; fever less than yesterday. Soda draughts occasionally, and colchicum at night as yesterday.

10th, Is rather better; skin cool; pulse feeble; tongue white. Haust. magnes. sulphat. c. sodæ sesquicarb, statim, et haust. colch. nocte ut heri.

11th, Fever has subsided; skin cool: says he feels well. Quinæ disulph. gr. vj. ter in die, et haust colch. nocte.

12th, Continues better. Quinine as before.

15th, Discharged well.

Case 41. Mr. William Johnstone, æt. 29, first engineer.

May 10th, 1842, at King Bell's Town, complains of having caught cold two days ago from sleeping under the mouth of the windsail. Is now suffering from severe headache and the usual symptoms of fever. Haust. emetic. statim ; et postea mist. magnes. sulphat. in impetu effervescentiæ. Vespere, Haust. colch. c. solut. morphiæ.

11th, Is better to-day. Haust. colch. nocte ut heri.

12th, Some return of fever at night. Quininæ gr. v. ter in die. et haust. colch. nocte.

13th, Tongue white ; bowels open ; skin cool. Quinine and draught continued.

14th, Fever not quite subsided. Medicines continued.

17th, Going on well ; appetite returning. Quinine as before.

22nd, Discharged to duty.

Case 42. Mr. James E. Terry, æt. 23, commissioners' clerk.

May 10th, 1842, at King Bell's Town. Returned yeterday from two days' excursion up the river Cameroons. While absent, had felt very unwell. Is now suffering from headache, confined bowels, sense of lassitude and pain of the loins and limbs. Pil. colocynth. co. ij. et postea haust. magnes. sulphat. Vespere, Haust. colch. c. sol. morphiæ.

11th, Less febrile action to-day. To take the saline diaphoretic mixture, also the colchicum draught at night.

12th, Quinæ disulphat. ter in die. et haust. colch. nocte. Vespere, Some return of fever.

13th, Bowels open. Medicines continued.
15th, Fever gone. Discharged to duty.

The next case of fever occurred to an individual recently arrived from England (Mr. Alex. Ross). At the period of this attack no fever had existed in the vessel for some time, nor did any other case succeed this one whilst we remained on the coast.

Case 43. Mr. Alexander Ross, æt. 25, second engineer; healthy and muscular; of sanguine temperament and sober habits; never before out of England; had arrived on the coast about a month, but had lately suffered from dysentery whilst at Ascension, and during his passage from that island to Fernando Po, for the purpose of joining the Wilberforce.

June 7th, 1842, at sea between Fernando Po and the Island of Princes, felt so unwell while on duty during the middle watch (three or four o'clock in the morning) that he retired to bed. Complained of pain in the loins and larger joints generally, with head-ache; dry skin, and flushed countenance; pulse quick; bowels open yesterday; tongue moist and white. Hydr. chlorid. ℈j. statim sumendum. 9 a.m. Head-ache increased ; v. s. ad ℥xij.; haust. magnes. sulphat. statim; lotio frigida capiti. 6 p.m. Bowels open; tongue much furred ; feels easier.

8th, Passed a tolerable night, and states himself much better; bowels open during the night; head-ache and pain gone; tongue clean. A Seidlitz draught to be given to keep up the discharge from the bowels. 6 P.M. Continued well during the day, but towards evening pains of the loins and joints returned with increased severity.

℞ Vin. colchici ♏xxx.
Sol. morphiæ hydrochlor. ♏xxv.
Aquæ f℥j. m. ft. haust. h. s. s.

9th, Slept well during the night, and feels greatly relieved; bowels confined. Seidlitz draught to be repeated. 8 P.M. Syncope on rising from bed; restless, but no pain or uneasiness otherwise; towards evening the febrile symptoms increased, with slight vomiting of yellowish green fluid; bowels open. Haust. colch. ut heri.

10th, Did not sleep well; complains of nothing, but feels depressed and languid; tongue moist; pulse rather full, 96; bowels open; skin covered with perspiration; no vomiting since yesterday. Soda draughts occasionally. 6 P.M. Febrile action increased; pulse 100; face flushed; eyes suffused; has had some vomiting of bilious matter; no pain on pressure of the stomach; skin moist. Repet. haust. colch. c. sol. morph. hydrochlor. ♏xx.

11th, Passed a comfortable night; feels better; skin cool and moist; bowels open; pulse soft, 90; slight irritability of stomach; tongue rather coated with whitish fur. To have a Seidlitz draught. 6 P.M. Complains of debility, and fainted on making a slight exertion. Continue draught.

12th, Slept well; tongue clean; skin hot but moist. Saline effervescing draughts during the day.

13th, Much as yesterday; tongue moist and clean; slight yellowness of the face and conjunctiva; bowels not open. Hydr. chlorid. ℈j. to be followed in four hours by haust. magnes. sulphat. 6 P. M. The draught was rejected, but subsequently a Seidlitz powder was retained, and produced a full evacuation of fæculent matter. 9 P.M. Appeared to be enjoying a comfortable sleep, but on more minute inspection he was found to be labouring under symptoms of cerebral effusion:—pupils slightly dilated; but they contracted on the approximation of a lighted candle; is not roused on being spoken to or moved. Emplast. lyttæ temporibus et nuchæ capitis; Ol. croton. ♏ij. statim sumend.

14th, Continued during the night much as described above, except that the symptoms of effusion are now well marked. Mustard-poultices to the calves of the legs. The blisters at the temples have risen well, and produced a considerable discharge of yellow serum. Takes a little arrow-root and wine. Symptoms of dissolution advanced till 11 P. M., when respiration ceased.

Sectio cadaveris.—Seven hours after death; stomach distended with a dirty coloured greenish fluid; the membranes pale, presenting two or three minute patches of a red colour near the pyloric orifice. The external appearance of the bowels pale and healthy. The colon and ileum presented two or three minute red patches on their mucous membrane, which was all that was discovered of deviation from a state of health. The right lung in its upper and posterior part contained a few clusters of tubercles; the left was normal; the heart soft but otherwise healthy; liver rather pale; gall-bladder slightly distended with bile and its duct not pervious; spleen about three times the natural size, and very pulpy; kidneys healthy. Head: dura mater pale, but its vessels congested; brain, softened, and in some parts exhibiting a few red points; some effusion of serous fluid between it and its membranes; the ventricles contained about half an ounce of limpid fluid.

Remarks.—Up to the sixth evening the symptoms continued remarkably favourable, and led me to anticipate speedy recovery, when the cerebral affection suddenly appeared, and progressed till the following night (the seventh evening), when death ensued. During the existence of fever in the River Niger, and more recently while in the River Cameroons, I have had recourse to the Vin. colchici, as I conceive, with considerable advantage; it too frequently, however, falls to the lot of practitioners in tropical climates to find all their efforts avail them nothing against the rapidly fatal tendencies of the diseases that there prevail.

After leaving Ascension on the 10th March, 1842, for the coast of Africa, where we arrived on the 20th, the vessel continued either at Fernando Po, or cruising along the neighbouring coast and islands, till the end of June following.

The weather during April was hot and sultry, accompanied almost daily by heavy showers. Frequent tornados also occurred, which were occasionally severe, but of short duration.* The maximum heat observed was 88° ; the average, 83,5° F.

During the month of May, when the vessel was employed surveying the River Cameroons, or in its neighbourhood, the weather for the first ten days was very fine. About the middle of the month, a good deal of rain fell, and we had tornados occasionally ; but on the 18th the weather again became fine, and continued so till near the end of the month, when we arrived at Fernando Po, the weather now being cloudy, with some rain.

The average temperature was 83°.

In the month of June we were visited by rain almost every day, more especially about the middle of the month, while lying off Bimbia and the Amboises Islands, when several violent tornados occurred, sometimes following each other for several days in succession. This part of the coast was very thickly wooded, which probably occasioned the greater prevalence of rains.

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* Very shortly after our first arrival off Sierra Leone, (June 25th,) we encountered a tornado of extreme violence, which happily did no injury to the iron steam-vessels, though the commissariat offices on shore were struck by the lightning and considerably shattered, the ground in their vicinity appearing as if torn up with ploughshares. Four persons also were killed, two of whom were thunder-worshippers, a sect which, on the occurrence of lightning, hurry to meet it where the flashes are most vivid. The vessels probably escaped, although in the very midst of the storm, in consequence of being fitted up with Mr. Harris's conductors.

The average temperature of the month was 80°.

On the 29th of June, 1842, the Wilberforce again left Fernando Po for the Model Farm at the confluence of the rivers Niger and Tchadda, with a black crew under the command of Lieutenant Webb, in obedience to instructions received from home. I add with much regret, that two of the eight whites who were on board the vessel on this occasion fell victims to fever—Mr. Webb, the clerk in charge, and the boatswain.

The officers and white crew of the Wilberforce embarked on board H.M. steam-vessel Kite on the 7th of July for passage to England, and arrived at Plymouth on the 1st of September following. During the passage home only one case of remittent fever occurred, the last to be recorded, of which Captain Allen of the Wilberforce was the subject. The attack was severe, and took place at sea, between the Cape de Verdes and Teneriffe.

Captain William Allen, æt. 50. Left Sierra Leone thirteen days ago, having resided on shore five days.

Aug. 8th, Was attacked about four o'clock in the morning with rigors, pain in the head and loins, restlessness, and a feeling of general indisposition.

8 A.M. Pulse quick; skin hot; considerable pain of the head and loins; thirst, &c. Pil. colocyn. com ij. to be followed in four hours by a dose of the sulphate of magnesia. Vespere, Head very hot. Evaporating lotion to be applied.

℞ Liquoris ammon. acet. f℥iss.
Potas. nitrat. ℈iss.
Sp. æther. nitrici f℥iij.
Aquæ. f℥vj. fiat. mist. sit dosis cochlearia tria magna tertia quaque hora.

9th, Bowels freely open; heat of skin and headache continue. Repeat the sulphate of magnesia.

10th, Slept tolerably; skin cool; pulse soft, 80; bowels freely open. Towards evening, heat of skin and headache, with restlessness, returned; also vomiting of biliary matter, and in the night excitement and delirium. Soda draughts administered occasionally.

11th, Slept badly; skin hot; tongue coated; pulse 100. 6 A.M. Administered a saline aperient, which was rejected; repeated by and by, it remained on the stomach and operated on the bowels.

12th, Slept badly; very restless all night; tongue thickly coated, but feels much better this morning. Discharge kept up from the bowels by the use of Seidlitz powders.

13th, Slept tolerably; slight headache with vertigo; pulse soft. To have a warm bath.

14th, Felt wonderfully better after the bath yesterday; bowels open.

℞ Quinæ disulphatis gr. iij. bis in die.

16th, Has a dull, uneasy sensation of the head, with vertigo; otherwise improving. To have cold affusion to the head. Quinine continued, with Seidlitz powders occasionally.

20th, Appetite excellent. Continues to go on favourably.

22nd, Well.

GENERAL REMARKS ON FEVER.

THERE is no subject in medical science more interesting than FEVER. It must necessarily have been one of the first diseases which attracted the attention of mankind; and to the present hour it continues that upon the cause and nature of which the mind of the medical world is probably least made up. In our own day, we have even seen the essential nature of fever denied entirely. The group of morbid phenomena entitled fever, it has been said by one, is due to an irritation or inflammation of the gastro-intestinal mucous membrane; by another it has been maintained to be connected with an irritation or inflammation of the brain and its meninges; by a third it has been held dependent on an irritation or inflammation of the lining membrane of the heart and arteries, and so on. A somewhat greater unanimity appears to have prevailed in regard to the cause of fever. Fever, in the more temperate latitudes of the earth, being more prevalent in marshy districts than elsewhere, the idea of a poison, the efficient cause of the disease, engendered in such districts, has long had possession of men's minds ; and a *miasm* or *malaria* having been imagined, all became easy after this : as a man becomes affected in a certain determinate way by a dose of laudanum, so does he become affected in another determinate way by a dose of marsh miasm or malaria. To pass by the inability in which all have hitherto found themselves to show any of this miasm or malaria, or to demonstrate its existence by any chemical or sensible test, many have been sadly puzzled to find themselves surrounded by fever of the worst character, in situations and circumstances very different from those in which malaria is by general consent believed to be especially engendered.

The air of the atmosphere of any one country would not appear to differ sensibly in its chemical composition from that of any other country. It is identical in the wilds of Africa, and in the crowded streets of London ; at the level of the sea, and at an elevation of sixteen or seventeen thousand feet above the earth's surface. There are other elements or conditions, however, which, though they are not taken into the chemical reckoning, ought to arrest attention, the rather as they are fluctuating, and therefore the more likely to be connected with the varying effects which the climate of every parallel of latitude and of every spot on the earth's surface has upon the health of man. The varying elements or conditions of the atmosphere are its temperature, its moisture, and its electricity. There is also another agency which appears to me to have attracted less attention generally than it merits, in the investigation of the causes of fever in tropical countries; this is what has been spoken of under the title of the solar influence

Mr. Boyle, in his work on the Climate of the Western Coast of Africa, is one of the writers who lays great stress on both solar and lunar influence in the production of fever. He is of opinion that fever arises from a powerful shock or impression made in some way upon the nervous system, an impression to which reaction in the vascular system does not always nor necessarily succeed, many instances having occurred of men previously in perfect health dropping down whilst at work under the burning rays of the sun, as if they had been shot through the head or heart.

It is very generally, and I imagine very properly, believed, that fever is increased in frequency and virulence, in proportion to the combined heat and moistness of the air; for the air may be extremely moist if it be not hot, or excessively hot if it be not moist, without proving greatly injurious to the human constitution. There can be no doubt, however, that fever sometimes prevails with great malignity in situations where the ordinary atmosphere is hot and dry. At Kingston, in Jamaica, for example, the soil is sandy, the heat extreme, and the air free from peculiar moistness; yet fever is endemical at Kingston, and upon occasion dreadfully fatal. In Africa the most unhealthy periods are usually observed at the commencement and towards the termination, not at the height of the rainy season. Sir William Burnett, indeed, remarks, that the rainy season is not the period when ardent fevers are to be expected in hot climates, the experience of ages having taught us that they more commonly prevail in the dry season, when the surface of the earth is thoroughly baked by exposure to the rays of the sun. It is interesting to observe in this place, too, that when the rainy season has been imperfectly formed, when there has been an unusual continuance of drought, instead of reiterated deluges of rain, that then fever has been noted as extremely prevalent, and dreadfully destructive. When fever was excessively rife at Sierra Leone, at the two epochs 1823 and 1829, there was a striking similarity in the meteorological phenomena; at both periods the weather was unseasonable, hot sunshine alternating with heavy showers of rain, accompanied by thunder and lightning.

With all this, it must not be forgotten that fever frequently rages with great violence at the height of the rainy season, when all the low grounds of the district are under water.

The majority of writers, however, seem to have a comfortable persuasion that they have satisfactorily accounted for the origin of fever, when they have invoked the agency of the effluvium or miasm entitled malaria, the product of the decomposition of vegetable matters under the influence of heat and moisture. To such lengths has this theory gone, that so respectable an authority as Dr. Macculloch (Essay on Malaria, p. 31) may be found speaking of a pond constructed to hold a few gold fishes, and a meandering stream ornamented with bulrushes and water-lilies, as common sources of disease and death, and that in a country so temperate as England. Nevertheless, Dr. Macculloch may be found informing us that Singapore, which lies under the direct rays of a vertical sun, and abounds with swamps and jungle, and where all the conditions to the production of miasm or malaria exist in perfection, enjoys great immunity from fever. This single fact seems sufficient to overthrow all preconceived ideas of malaria; and, to use Dr. Macculloch's own words, makes us suspicious of all the information upon which the reasonings in regard to its influence have been founded.

Dr. Johnson is a disciple of the doctrine of malaria, but he owns, (Tropical Climates, &c. p. 92,) that at Calcutta fever prevails with greatest violence during the months of August and September, when the banks of the Hoogly are overflowed, while during May and June, when the heat is excessive, and the banks of the river at low water present on either side a broad shelving slope of reeking mud, covered with vegetable and animal remains in all stages of decomposition, and disengaging the most abominable stench, fever is comparatively a rare disease; no ill effects seem to be produced by such exhalations. Dr. Johnson attempts to account for this by supposing, that the tides do not allow time for the extrication of any properly noxious effluvium. Be this as it may, the circumstances, as I have stated them, appear to me to afford strong argument against the existence or influence of miasm or malaria.

Dr. Robert Armstrong, Deputy Inspector of Naval Hospitals and Fleets at Plymouth, informs us (Nautical Magazine for June, 1842) that on two occasions he has penetrated the swamps of Batavia at midnight in quest of the agent designated malaria, but without being able to find it. This gentleman also pursued the same investigation when in charge of the Naval Hospital at Port Royal, Jamaica,—having repeatedly entered the mangrove swamps in the Pallisades late at night and before day-light in the morning—but with no better success. The air and the water were examined by the most delicate tests in the hope of discovering some obvious cause of the ravages of the yellow fever which prevailed at the time, but neither the air, the water, nor the soil offered any sensible deviation from their usual qualities. Mr. J. Renald Martin (Johnson and Martin on Tropical Climates, p. 248) may well exclaim, with such facts before him, that we are as ignorant of the nature and essence of this ideal substance as we are of the inhabitants of the Georgium Sidus.

Dr. William Ferguson has stated, among numerous similar facts, that near Ciudad Rodrigo, when the surface had become as dry as a brick ground, and all vegetation had been burnt up, fever of great malignity made its appearance among the troops. As a contrast to this, the eastern frontier of our Cape territories may be mentioned, where, with one of the driest climates in the world, the thermometer frequently ranges for several weeks between 105° and 110° F. in the shade, and where for several successive months it is seldom under 95° F. at noon, and where, notwithstanding all this, the exemption from disease is almost unparalleled. Some of the stations on the Eastern Cape frontier, too, are situated near the banks of a river, which ought to produce fever here, as rivers are held to do elsewhere, particularly under the influence of an elevated temperature.

Mr. W. Fergusson, Staff-Surgeon at Sierra Leone, believes that yellow fever originates in that colony, and from thence extends to the localities on the coast, and even to the Island of Ascension, being propagated by the bodies of the infected. The principal evidence adduced in favour of this opinion is the circumstance of the disease arising about the same periods at certain localities, and after the arrival of men of war from Sierra Leone.—H.M. brig Curlew left Sierra Leone in the middle of May, 1837, for the Gambia, and arrived at Bathurst on the 4th of June—and propagated fever there, as it was said, by contagion. Yet Dr. Barton states, that although frequent communications occurred between this place and M'Carthy's Island, not a single case of the disease appeared at the latter settlement.

In a conversation which I had very recently with Mr. Fergusson, he seemed entirely to coincide with me in considering the origin of the disease to be atmospheric;—he allowed that within certain parallels of latitude along the coast, the same state or condition of atmosphere existed, and only required individuals predisposed to be acted on, to show its disease-engendering power. Now, if this be admitted, the prevalence of fever at particular periods is at once explained, without any reference to contagion; and, so far as my observation has gone, both in the West Indies and on the coast of Africa, not a single circumstance presents itself to my mind which would lead me to suppose that the endemical remittent fever of these countries was ever propagated by contagion. Any disease that was found to extend by these means I should be inclined to view as a distinct species of fever, arising at distant intervals of time, and of a nature different from that which is witnessed annually by every vessel cruising off the coast of Africa.

Having lately spent upwards of three months on the Island of Ascension, I came to the conclusion that it only required a certain peculiarity of season to engender on this island the same disease as is witnessed on the African coast. The temperature is nearly the same, and a hot season and excessive rains seem alone necessary to develop the disease, which, in my opinion, arises, and will continue to arise, periodically without reference to its existence at Sierra Leone.

The Island of Ascension, it should be stated, is greatly deficient in vegetation. On approaching it, nothing is visible but a sterile accumulation of cinders interspersed with extinct craters. The centre of the island, at a distance of several miles from the shore, is alone possessed of verdure, which is discovered only by the use of a telescope. The decomposition of vegetable matter as the cause of disease seems totally out of the question here. Entering into conversation upon one occasion respecting the salubrity of the place with some of the inhabitants, during the prevalence of heavy rains, they expressed to me their fears of an outbreak of fever, as this always occurred after an unusually wet season, which is here very rare. This remark made casually, and without reference to any theoretical views, tended to confirm me in the opinion I had previously entertained.

Crawford's Island, one of the Isles de Loss, on the western coast of Africa, where our troops were formerly stationed, is a granite rock, elevated 250 feet above the level of the sea, without the luxuriant vegetation which commonly prevails in that part of the world, and entirely free from marshes and pools of water; yet the mortality here (600 per thousand annually) exceeded that at the Gambia (500 per thousand,) and was nearly equal to that of Sierra Leone (650 per thousand.) Major Tulloch, from these data, concludes, that excessive moisture, high temperature, variations in atmospheric pressure, and the prevalence of particular winds, can have nothing to do with the production of febrile disease.

From the tables of the sickness, mortality, and invaliding, among the troops, drawn up by Major Tulloch, which have lately appeared, we perceive that two countries situated at the same distance from the equator, but in opposite hemispheres, having as nearly as possible the same temperature, and the same physical characters, have frequently very different ratios of mortality from fever. Whilst in Jamaica, for example, the loss from fever in a given number of years is 2550; in Mauritius it is but ONE! In both islands there is the same mountainous elevation in the interior, and about the same amount of marshy land.

Dr. Wilson, Inspector of naval hospitals and fleets, in his statistical Report on the Navy, has drawn attention to the singular immunity from endemical disease enjoyed by the vast continent of South America, a great portion of which is situated within the tropics, and where marshes and lagoons abound, prolific sources of fever, according to received opinion. From Para to Rio de Janeiro the temperature is actually higher than in the gulf of Mexico, where fever prevails with such destructive force. With the continent of Southern America before us, we seem to have an assurance that vegetable matter, in a state of decomposition under the influence of high temperature, is not the chief agency that produces the fever which prevails so fatally in certain intertropical countries. Nay, I conceive that we are warranted in going further, and in saying, that the doctrine of miasm or malaria is a mere hypothesis, which, from having been cherished over-fondly, has been prejudicial much rather than useful. In their contentment with this as the general cause of fever, I apprehend that practitioners have been led to overlook the true causes of the deadly febrile diseases, endemical in so many intertropical climates.

Various local and accidental phenomena, such as volcanic eruptions and earthquakes, have been held to be influential in the production of endemical and epidemical febrile disease. Volcanos have been supposed to give out deleterious agents to the atmosphere, in one case locally, in another, more extensively and at irregular periods; an idea, in support of which, Dr. Webster, of America, has cited a number of facts. Many of the older writers attributed epidemical disease to gases issuing from the earth, and to intense heat; offensive smells have at all times been looked upon as fruitful sources of febrile disease in particular.

In volcanic countries, again, as at Naples, sulphur fumes and acid emanations are popularly conjectured to be instrumental in causing the insalubrity which is there notorious.

Great stress has been laid on the fact, that a few drops of putrid water injected into the veins of animals, produce all the symptoms of malignant fever. I cannot see, however, that this throws any light upon the subject of ordinary fever.

With regard to the theory of Animalcules, as the cause of endemical and epidemical febrile diseases, a theory which has of late acquired some advocates, I have little to say. The subject has been carefully investigated by some of the best microscopic observers, especially by Henle, in Germany, but nothing has been discovered. The accomplished observer just named has never succeeded in catching any of these malignant infusories within the field of his microscope. It has also been very properly observed by Mr. Farr, that the hypothesis of Animalcules does not satisfactorily explain the cause of epidemics, inasmuch as it does not show why the animalcules should be created at distant times, or how, being produced, they should have any power to occasion such effects as are ascribed to them. For my own part, I can conceive it possible that animalcules should co-exist with a particular epidemic, and yet have nothing whatever to do with the production of the disease; they might arise under the influence of the same agent as the epidemic itself. When we see epidemics, such as plague, cholera, and small-pox, spreading from hot climates to cold, and from cold to hot, as it is shown by the history of the world that they do, we must needs regard them as connected with some far pervading physical cause, with the nature of which we are unacquainted. That some particular constitution of atmosphere is necessary to the prevalence of every disease, is evident from the fact, that certain diseases always exist sporadically, more or less, and that it is only periodically, that they greatly prevail or become epidemical.

The latest theory of the cause of intertropical fever that has been broached, is that of Sulphuretted Hydrogen. Professor Daniell, of King's College, having, in April, 1840, detected this gas in certain specimens of water, brought from the rivers of the western coast of Africa, it was immediately concluded that nothing more was wanting to explain the cause of the insalubrity of the climate there. One fifteen-hundredth part of sulphuretted hydrogen being present in the atmosphere has been said to act as a direct poison upon small animals, and the sensations of languor and nausea described by some African travellers, as so distressingly experienced by them, Professor Daniell considered to arise from this cause.

In obedience to directions received from the Inspector General of Naval Hospitals and Fleets, on the Wilberforce reaching the coast of Africa, and also in proceeding up, and on our way down the Niger, the most rigid and careful investigation of the waters was instituted every hour, the tests used being sulphate of copper, nitrate of silver, solution of arsenic, ferrocyanate of potass, carbonate of lead, tartrate of antimony, and lastly, the terchloride of gold, but in no instance was the slightest trace of sulphuretted hydrogen detected. There can be no doubt, therefore, that the sulphuretted hydrogen found by Professor Daniell arose from the decomposition of the water in the course of its transmission to England from the coast of Africa; nor is it necessary to go to the mouths of the Niger and

Gambia to procure water, which, after being kept five or six weeks, shall yield sulphuretted hydrogen gas abundantly ; the water of the Thames may be tried with an assurance of having by and by a very satisfactory demonstration of this fact.

But even if sulphuretted hydrogen were evolved from the waters of the west coast of Africa, would this explain the fevers which there prevail? All the world knows that every chemical lecturer produces sulphuretted hydrogen gas in abundance in his lecture-room, and that its odour is sometimes disseminated for the edification of the audience, but never with the effect of inducing African fever among them. In the Wilberforce, an evolution of sulphuretted hydrogen ensued to a very disagreeable extent on several occasions, in consequence of the bursting of some cases of preserved meats; but in no instance did any disease take place from this cause; when the stench was excessive, a slight faintness, followed by nausea, was complained of for a moment; but these symptoms speedily passed off on coming into the open air, and no ulterior ill effect ensued. An occurrence of this kind took place at St. Antonio, Cape de Verds, on the 17th of June, 1841, when the heat was very intense, and the stench so intolerable as to drive every one from the immediate neighbourhood whence the canisters were removed and thrown overboard.

With regard to the "horrid sickening stench" arising from the "accursed swamps," described by Mr. Laird, I am compelled to acknowledge that I never experienced anything of the kind during the period of the Wilberforce being in the Niger; nor, so far as I heard, or could ascertain by inquiry, did any other person experience any stench akin to that described by Mr. Laird. I certainly never met with any stench there to compare with that which has constantly greeted me at all seasons in walking from Greenwich to Woolwich. At the period when almost every white man in the Wilberforce was attacked with fever at the confluence of the rivers Niger and Tchadda, the weather was very fine, and, although hot, yet a considerable breeze frequently prevailed; nothing visible, and nothing ascertainable by the olfactories, existed to account for the wide-spreading malady.

Carbonic acid gas is another agent which has been supposed to be a generator of fever. It is freely eliminated in many chemical processes, and is abundantly given off from the bowels of the earth in various parts of the world. At the town of Franzensbad, in Austria, to name a single instance, it is constantly issuing forth in great abundance from the ground, making a rumbling noise as it rises through the water. The inhabitants of the district of Franzensbad must be perpetually inhaling an atmosphere considerably charged with carbonic acid gas, so far as I can ascertain, without any injurious effects, particularly without having suffered in an unusual manner from fever. Where vegetation is so luxuriant as on the banks of the Niger, it is natural to suppose that the elimination of carbonic acid by the leaves through the night, may tend, during this season, somewhat to surcharge the air with the gas. During the day, however, it is to be remembered that carbonic acid gas is most rapidly absorbed by the leaves of living vegetables, and that then they begin to give off oxygen gas in quantities sufficient to compensate for all that is consumed in the respiration of animals, in combustion, decomposition, &c.* Before quitting this subject, I ought to say, that the Baron von Humboldt believed the mangrove forests to vitiate the air, and attributed fever to this source.

Carburetted hydrogen.—Dr. John Hunter remarked, that marshy ground produced this gas in abundance ; but he observed, that were this the cause of fever, the disease would be frequent in mines, which is not the case ; the offensive smell of marshes has been ascribed, in a great measure, to the evolution of carburetted hydrogen from their surface. (See Hunter on the Diseases of Jamaica, p. 185.)

In taking a retrospective view of the African remittent fever, which prevailed in the Wilberforce, in common with the other vessels of the Niger expedition, it is somewhat remarkable, that although we entered the Niger on the 15th of August, anchoring inside the bar of the Nun, and refitting there till the 20th, when we steamed onwards, it was not till the 4th of September that the first case was put on the sick list. We had anchored, nevertheless, off the Eboe Creek on the evening of the 25th, and remained there till the afternoon of the 28th, when we proceeded to Iddah. On the 27th, I visited the alluvial city of Eboe, in company with Drs. McWilliam and Stanger, Mr. Marshall, and the Rev. Mr. Schön. We found the place completely inundated, and were obliged to walk through the streets with the mud and slime up to our knees. Of all who visited Eboe during our three days' stay there, I, however, know but of one, Mr. Marshall, who suffered from fever, and he was not attacked until the tenth day after, when the disease began to prevail generally. The fever, therefore, only made its appearance when the anticipations of all had contemplated security. We were under the impression, that, having passed the Delta, which had been supposed peculiarly fraught with the causes of disease, we had, in fact, now entered a salubrious region. It bore every appearance of being so: the ground was elevated, and must be free, it was presumed, from all the causes of mortality suspected to emanate from the swampy banks below. On the evening of the 2nd of September, we arrived off the Iddah cliffs. The country here wore the aspect of a nobleman's park in England, ornamented with tropical vegetation, and was most picturesque; especially when contrasted with the low country overflowed by the stream, and abound-ing in swamps and reeds, and long grass, which had hitherto greeted us. The lofty range of the Kong mountains, seen rising above the confluence of the Niger and Tchadda, added to the beauty of the prospect, and seemed other and surer guarantees for the salubrity of the climate. The freedom we had hitherto experienced from disease, indeed, induced the officers and people generally to consider the country as equalling our own in salubrity; and there were even speculations afloat as to the Niger becoming, at no distant period, a fashionable resort for travellers, as well as the Rhine and the Danube. But these feelings of security and gratulation were very short-lived, for pestilence was stealing on us in silence, and was soon to show itself visibly among the ranks of the expedition.

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* Vide Daubeny, in Philos. Trans. 1836, and Liebig's Organic Vegetable Chemistry, by Playfair. London, 1840.

The weather we had experienced in our progress, till our arrival at Iddah, had been fine; the days were beautiful, and ever and anon refreshed with heavy showers, which probably terminated about this time the rainy season. The variations of the thermometer were greater than along the coast, the highest temperature being 85°, and the lowest 73°. The minimum was always observed about daybreak, (from five to six in the morning;) the maximum occurred between two and three o'clock in the afternoon. Through the night and in the evenings and mornings the atmosphere was always very greatly charged with moisture, as was demonstrated by the wet and dry bulb thermometers, a degree and a half only of difference between the two being sometimes observed at these times. At the time sickness began to prevail, however, the weather had become intensely hot.

At the entrance of the river there was a variation of as many as twelve degrees in the thermometer in the course of the twenty-four hours; but I should not be inclined to anticipate any injurious effects from this vicissitude, were the air but dry; I am rather disposed to believe that the lower temperature of the night in tropical climates acts as a tonic, and gives to the body the vital energy which enables it to resist the advances of disease. Every one is acquainted with the common practice of the Russians in passing from the hot-bath to snow and ice, and enjoying this as a great luxury and preservative of health.

The climate of the Western Coast of Africa differs from that of the West Indies, and most other hot countries, in its extreme humidity; the atmosphere is literally for the major part nearly saturated with moisture, a fact which is shown by the hygrometer; and which is speedily learnt from experience by all who visit the country in the rapid destruction of clothing, and the constant formation of mildew on almost every thing when laid by for a single day, in the course of which boots, shoes, woollens, &c. become covered with a complete white coating of this vegetable substance.

This excessively moist condition of the air is temporarily abated by the condensation of its vapour into rain, when the breathing becomes more free, and a sense of renovation is experienced, that is quite refreshing.

Humidity we know greatly alters or modifies the functions performed by the extensive cutaneous structure, and also those that are entrusted to the lungs and liver, the human body being so constructed that under ordinary circumstances one function being diminished or increased another may surpass or fall short of its usual activity, and so maintain or restore the balance of the system. In excessively moist climates, however, the same cause, viz. moisture, which checks evaporation from the surface, likewise lessens the quantity of carbonic acid which is eliminated by the skin, and that to such an extent, that this structure may be considered as one of the prime adjuvants of the lungs, the proper medium by which the blood is purified from this deleterious agent. In excessively moist climates, consequently, there is a tendency in the vital fluid to become surcharged with carbonic acid gas, the rather as the lungs themselves there act with less energy; for heat and moisture combined tend to lessen the amount and completeness of the respiratory process.*

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* The prophylactic and curative influence of the Western Coast of Africa in cases of pulmonary disease are recorded in many instances. The atmosphere of this luxuriant shore would appear to be better calculated than any other to allow of reparative processes taking place in the respiratory organs; their action being greatly lessened they have time to rest and recover themselves. Mrs. Lee (late Bowdich), the graphical authoress of "Stories of Strange Lands," gives a remarkable instance of the influence of the atmosphere of Africa in preserving for upwards of 20 years the life of a gentleman who at an early age arrived at Cape Coast Castle, apparently dying of consumption; he however in a

It is on the same principle that ardent spirits, when taken to excess in tropical climates, become so injurious to the European constitution. Alcohol is principally composed of carbon and hydrogen, elements which it is the especial duty of the liver to remove from the system, these being the grand constituents of its secretion; but in the torrid zone the liver having its duty otherwise greatly increased by assisting the lungs in their office, it becomes unequal to the redoubled duty imposed upon it by drunkenness;

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few months perfectly recovered his health, and during a period of nearly 20 years' residence in the country, knew comparatively little of illness. He made one or two excursions during the interval to Europe, and judging from these that he had outlived all danger, he returned at length to England to enjoy the rest of his days. One winter, however, painfully convinced him that he was even more susceptible of the changes of our climate than he had ever been, and when it was too late he sought a milder atmosphere. Not finding Madeira warm enough, he sailed for Jamaica, where he sank into the grave. It would appear, therefore, that notwithstanding all the praises which have been bestowed on the lovely island, Madeira, that resting-place for the phthisical invalid, whose scenery is so grand and imposing, and whose air is so soft and balmy, yet Africa with all her faults is the true garden of Eden for those labouring under consumption.

Dr. Wilson has remarked, in his statistical report, that there is reason to believe that the cause of West Indian fever, when generally diffused, counteracts the development of tubercular disease; for in the year 1835, so prolific of fever, there were only eleven cases of phthisis in the squadron, being less than one half of any of the preceding five years. And, again, in the next year, 1836, the fever cases being remarkably few, there were considerably more than twice the number of cases of phthisis of the previous year, viz. 29. Thus showing the causes favourable to fever to be preventive of pulmonary disease.

the result is the accumulation of carbon and hydrogen in the system, and the circulation of highly impure blood through the body. Bichat states that accumulations of fat take place in some animals, and more especially in birds, in a few hours in damp foggy atmospheres. This arises from inability to discharge in due quantity the carbon and hydrogen of the system, which accumulate, combine, and are deposited in the form of fat. Hence it is common to see drunkards, and other persons who do not suffer from the endemical diseases, grow fat in hot, moist, and unhealthy climates.

The skin, the lungs, the liver, and the kidneys, with the intestinal canal, constitute the emunctory organs, the action of one compensating for that of the other under ordinary circumstances; when several of these organs are simultaneously deranged, however, a greater or less amount of constitutional disturbance ensues, and this in tropical countries becomes manifest in the production of remittent fever.

In a warm dry atmosphere the body is kept cool by constant evaporation from the surface, its secretion, the serum of the blood, flying off in vapour. Dr. Southwood Smith ascertained at the Phœnix gas-works, in the years 1836 and 1837, that workmen employed in high temperatures sometimes lose from three to four pounds per hour by perspiration; but the quantity was found to be greatly modified by the state of the weather, the average on a foggy day being only two pounds three ounces, while on a dry day with wind it was three pounds six ounces. It should likewise be remembered, that the invisible vapour constantly exhaling from the skin in dry weather is vastly greater in amount than that which is visible to us, and known as the sensible perspiration.

It has been calculated that upwards of ten ounces of carbon in the form of carbonic acid are daily exhaled from the lungs; and besides this, between fifteen and twenty ounces of fluid pass off in vapour by transudation from their vessels.

Any the slightest interference with the function of the lungs, such as takes place to a great extent in a damp and moist atmosphere, must, therefore, it is obvious, be likely to prove highly detrimental to the general health.

The suppression of the secretion of the kidney is also injurious, and has been stated to produce fever of a most malignant kind. The kidney is the outlet for the superfluous and effete nitrogen introduced into the system, and its function is altogether indispensable to life.

It is consistent with reason to believe that any unusual change in the nature and constitution of the blood, induced by the various processes of absorption, nutrition, and secretion, performed amiss, must be most rapidly subversive of health, and tend ultimately to the complete disorganization of the body. Fever occurring in a hot climate may be viewed, I conceive, to a certain extent, as an effort of nature to restore a normal condition in the various constituents of the frame which have become deranged by certain atmospherical conditions. Captain Cook, the great navigator, considered heat and moisture to be great promoters of sickness in hot climates; and it is well known that his crews experienced a remarkable degree of health in circumstances usually found highly detrimental, from the care he took in keeping fires below to dry the air. Dr. Lind has stated that the Edgar, 60 guns, when on the coast of Guinea in 1765, was very sickly, and many of the people died, whereas in a sloop of war which was in company with her, few were taken ill, and not one was lost. No other cause could be discovered for this difference, but that in the healthy ship the fire-place for cooking was on the lower deck, and the heat and smoke spread over the ship.

It has been observed, that the engineers and stokers of steam-vessels in climates where fever prevails, enjoy freedom from this disease; much engaged in the dry, hot air of the engine-room, they are to a certain extent in circumstances different from the rest of the crew. Should the vessels cease steaming, however, and make sail, or come to anchor, and these persons be employed cleaning the engines and performing other duties when the fires are out, for any length of time, they now fall victims to the malady. I should likewise observe, that fever usually makes its appearance during long stay in harbour, when the fires are not used, and the people are exposed to solar influence refitting. Evaporation from the surface of the body is also, under these circumstances, less energetic than when the vessel is going through the water at a rate of five, six, or more knots in the hour, the motion of the air greatly assisting this process.

The system, from exposure to a hot moist atmosphere for any length of time, may become to a certain extent predisposed to the advances of fever, or be rendered extremely liable to be acted on by any of the exciting causes of the disease, which appear to be various. That which was observed as preeminent in the present expedition, was solar influence; but I believe that the depressing passions, fatigue, bad or insufficient food, inadequate clothing, and drunkenness, are upon occasion effectual means of immediately inducing as well as predisposing to the disease.

The physical agency which presides over and regulates the secretions is in all probability electricity, emanating from, and being subordinate to, the nervous system. The electrical fluid, however, is influenced by certain conditions of the atmosphere, which alter its state, and modify its distribution, causing it in one instance to be in excess, in another, to be deficient.

This invisible agency may probably be considered as one of the means employed by nature for eliciting and sustaining life with its various attributes; it may be viewed as a power, a force, conveyed by the nerves to the different structures, and under ordinary circumstances supporting these in their integrity, and enabling them to perform the processes which pertain to them severally.

All substances are supposed naturally and usually to contain both the positive and negative kinds of electricity in a state of affinity and equilibrium; any combination of circumstances disturbing this equilibrium overcomes the natural attraction of the two kinds of electricity for each other, and disunites them. Moisture being a conductor of electricity, a separation of the two electricities possessed by the lower strata of the atmosphere, where the degree of humidity is greatest, readily takes place; and then the air more immediately in contact with the earth is often observed to be in a negative state, a state in which it may be supposed to attract and conduct away the positive electricity of the body, and so produce exhaustion of the nervous system in consequence of its incessant efforts to supply this vital stimulus. An individual subjected under such circumstances to solar influence, almost certainly manifests that peculiar derangement of the system which is known under the name of fever, in the more severe cases of which there is an obvious tendency to decomposition among the constituent elements of the body, even before the extinction of life: the vital laws are here superseded, the ordinary physical laws come into play. If this goes beyond a certain very limited extent, life ceases, and the body is resolved into its constituent elements in new forms of combination.

The bodies of those who die of malignant fevers, indeed, putrify with unusual rapidity after death. The carbon and nitrogen of the body seem frequently to have begun to unite with the oxygen of the air and the elements of water, and to form compounds, with which we are familiar in the inorganic world, even before the termination of life ; a very short period only after this has taken place, is necessary to the complete disorganization of the frame.

In the river Niger, almost every instance of fever that occurred could be traced to solar exposure, which was, therefore, the obvious immediate exciting cause; it probably became efficient by inducing unusual electrical separation, and a consequent disturbance in the naturally existing affinity. The first appreciable event in the chain of sequences constituting fever has been held to be a functional injury of the nervous system, accompanied by derangement in the performance of their duties by the various organic structures, and a consequent altered condition of the blood, constriction of the skin, retention of the contents of the bowels, cerebral excitement, confusion of ideas, &c. Upon this derangement of the nervous system follow the efforts of Nature to restore herself, made manifest especially by increased vascular action and evolution of heat. All the secretions being more or less obstructed, an accumulation of morbid matter pervades the system by and by. The liver, the lungs, and the skin, have their functions augmented beyond the degree which pertains to health, and endeavour to eject these morbid matters, and so relieve the system. Sometimes the relief is obtained by the rejection of purulent matter, or by some other discharge—a hemorrhage, a diarrhœa, which proves *critical*, or appears to act as a safety-valve, and then in due time the nearly moribund patient is restored.

The human body may be viewed as peculiarly fitted for electrical actions, its vessels replete with fluids, holding in solution various saline substances, and its beautiful and elaborate nervous system, being obvious channels for the transmission of electricity to the remotest constituent element of the body.

That the nerves are carriers of electricity, is satisfactorily shown by the experiment of cutting through the nerves which lead from the brain to the electrical organ of the torpedo and gymnotus; when this is done, the wonderful faculty which these animals possess, is immediately and altogether suspended. By stimulating the nerves which supply the electrical organs, on the other hand, the power and frequency of the shocks is increased.

It is well known that persons, by exposure to the sun, will frequently exhibit visible signs of being charged with electricity, and they have even been known to communicate electrical shocks to others. I may here mention a circumstance recorded by Dr. Robertson, while surgeon of the Weasel, in the river Gambia, in 1769. He states, that when feeling the pulse of a boy who was dying of fever, at the moment the lad expired, he received a shock, as though electrified, attended by a disagreeable sensation, not easily to be expressed, and quickly followed by a prostration of both strength and spirits, so that he had almost fainted before he reached his cabin. Dr. Robertson afterwards suffered a most severe attack of fever. In connexion with this point I may further observe, that Dr. Riche, a writer in the Revue Medicale, has recommended, where an excess of electricity exists, as is shown by cramp, tetanic contractions, &c., that this condition should be obviated by an energetic shock from a Leyden jar.

In some imperfect experiments made by myself on persons affected with fever, I observed that on making them take hold of the wires communicating with a needle, delicately suspended in a coil of silver wire, a considerable variation of the needle immediately ensued; but I regret to say, that in consequence of the great number of patients I had to attend to at this time, and the numerous occupations which devolved upon me, as well as from being without the proper means of isolation, I was unable to institute experiments sufficiently satisfactory to warrant me in giving them in detail.

In investigating the causes which have produced fever at different times, as well in the several unfortunate expeditions to Africa, as elsewhere, I consider that similar origin can mostly be traced, and that this has consisted very mainly in exposure to solar influence, aided by bodily fatigue and mental anxiety. The system I should say, however, is regularly prepared as it were to be influenced by this immediate deleterious influence by the damp atmosphere which always exists more or less along the Western Coast of Africa, and in its rivers generally.

The malignant fever which raged in the Bann, was attributed by the surgeon to the crew being exposed to the sun's rays in refitting the vessel during a long stay in port at Sierra Leone. (See Burnett's Official Report, p. 25.) Captain Boteler has stated, that on the 5th November, 1822, H. M. ship Leven had upwards of twenty of her men affected with fever at Delagoa, and in the river Dundas, and among them there was not one whose duty had not subjected him to exposure to the scorching sun in surveying, &c. &c.; those who remained on board and under shelter escaped.

Mr. M'Kerrow, the assistant-surgeon in medical charge of the expedition to the Congo, under Captain Tuckey, considered the fever which was so destructive to have been caused by fatigue, intemperance, and exposure to the sun; these, in a word, he observed as the exciting causes of the disease. The people being allowed to go on shore on liberty, seemed generally to pass the day in running about the country, from one village to another, and indulging in debauchery. Captain Tuckey himself says, that nothing could be finer than the climate, and describes the nights as very pleasant. Nevertheless, most of the officers and savans of the expedition, in all 21 persons, (out of 54,) died within three months. The fever under which they sunk was of a most violent remittent type, and the fatal termination happened in some as early as the third and fourth day; in others it was protracted to the twentieth. In looking over the history of the various fatal cases as given in Captain Tuckey's narrative, Mr. M'Kerrow's statement of the malady being caused by excessive fatigue and exposure to the sun, appears to be fully borne out by the facts; the enthusiasm of the various officers and scientific men induced them at the very outset to undertake long marches, and to brave exposure of every kind.

Dr. Robertson, in his account of the fever which occurred in H. M. ship Weasel, in the river Gambia, in 1769, states, that the vessel proceeded up the river on the 1st of August, and ran aground near Fort St. James, which occasioned the men to be very much fatigued in the heat of the sun, the weather being very sultry. At this time there were only two cases of ague on the sick list. On the 7th of the month, we find most of the officers and gentlemen on shore shooting, and on the next day, there are five cases of fever recorded, and they went on augmenting in number, till, on the 26th, we observe thirty-five bad cases of the disease in the vessel. On the 5th of September, there is a remark respecting the weather, that the rains have been over for some time, and the people on shore are well.

I see it stated in the newspapers very recently, that Captain Sir H. F. Senhouse died of fever, brought on by exposure to the sun in China, perhaps coupled with fatigue and anxiety.

Dr. Lind has truly remarked, that the persons employed in unhealthy tropical climates are for the most part totally ignorant of the sources of the disease and death which surround them ; yet he mentions the intolerable scorching heat at noon, and advises all employed at this time in hot climates to have their heads covered with a bladder dipped in vinegar. (Lind on Hot Climates, p. 145 to 148.

I would likewise add a short history as given in Dr. Wilson's Statistical Report of the Navy, of three ships in the West Indies, viz., the Vestal, the Rainbow, and the Forte, in which fever occurred in 1835. The Vestal had been in Port Royal Harbour nearly four months, with two short exceptions, when fever broke out, and 157 cases occurred, out of which number 28 proved fatal. It is stated that the disease was not connected with any want of cleanness, or neglect of ventilation, for the holds had lately been cleared, thoroughly cleaned and whitewashed, that windsails had been diligently employed, and chloride of lime sprinkled on the decks abundantly. The Vestal sailed for Bermuda on the 28th of April, and the disease ceased on the 8th of May, in the 27th degree of north latitude.

The Rainbow had lain in Port Royal Harbour, Jamaica, for six weeks previously to the occurrence of the fever, which made its appearance in the vessel in July, and did not terminate till October. Fifty-five cases occurred, of which sixteen terminated fatally. The crew were removed into the Magnificent, and employed to clean holds, &c. there, when the fever broke out again among the persons engaged in this duty.

The Forte had been five weeks in Port Royal Harbour; whilst clearing the holds and cleaning the ship, her people lived on board the Magnificent. The Forte sailed for Vera Cruz, on the 11th of June, and three days afterwards the disease broke out; there were 123 cases, in all of which, five proved fatal. Dr. Wilson states that the circumstance of cleaning ship, refitting, &c., is constantly found connected with the appearance of febrile disease, and the same remark was made many years ago by Sir William Burnett. The causes being most probably fatigue and exposure to the sun.

I might multiply facts to an endless extent, all tending to prove the influence of exposure to the direct rays of the sun in the production of fever in low latitudes; so constantly, indeed, do I find this circumstance indicated in the accounts of fever to which I have referred, that I cannot but express amazement that attention has not hitherto been more particularly directed to the circumstance than it is.

In the Wilberforce, scarcely a case of fever occurred which could not be distinctly traced to this source, although it should be observed that a single exposure to solar influence was rarely sufficient to produce the disease; many persons exposed themselves repeatedly with impunity, and then laughed at all precaution as unnecessary, instancing the sunnings which they had received on various occasions without any injurious result. When I heard any one indulging in this strain, I was soon taught to expect him upon the sick list; and there indeed his name very certainly appeared before many days had passed; and too frequently before many more had flown, the disease with which he was assailed, had run its course, and he was numbered with the dead.

The influence which induces fever in intertropical countries would appear to be of an accumulative nature;—probably the vital principle proved sufficient to resist the deleterious agency in a certain dose for a certain period, and to maintain the functions in a state of integrity; but the dose accumulating, the powers of life at length give way, the equilibrium upon which health depends is destroyed, and then chemical affinity as opposed to vital attraction is left to destroy the body.

I here add, in illustration of these remarks, the following brief summary of the fatal cases of fever which occurred on board the Wilberforce, taking them as they appear entered in my sick book.

James Kneebone, æt. 23, seaman; was attacked on the 4th of September, after having at intervals during some days past been exposed to the sun, heaving the lead, the vessel being employed in surveying the river.

William Allford, æt. 23, seaman; attacked on the 5th of September, having been exposed to the sun heaving the lead.

William Rabling, æt. 29, sapper and miner; attacked on the 6th, having been employed as a blacksmith, working at the forge for some time past, immediately abreast of the gangway, where the heat of the sun was encountered more directly than in any other part of the ship.

Peter Fitzgerald, æt. 27, stoker; attacked on the 16th of September, having been employed about the engines. This is the only fatal case which cannot be directly traced to exposure to solar influence.

Mr. Cyrus Wakeham, æt. 45, purser; attacked on the 17th. Had been employed on deck abreast of the gangway for some days previously, purchasing provisions from the natives, exposed to the noon-day sun. Mr. Wakeham was seized with fever while so employed on deck.

Mr. G. B. Harvey, æt. 32, master of the Albert, was received into the Wilberforce on the 20th of September, having been attacked immediately after amusing himself on shore shooting, in the heat of the noon-day sun.

Mr. Collman, æt. 36, assistant-surgeon of the Soudan; was seized while on shore exposed to the sun on the 20th of September.

George Cuthbertson, æt. 38, serjeant of marines; attacked on the 26th of September. Had been employed before the purser's illness with him, and afterwards alone, purchasing provisions, and was exposed even in a greater degree than that officer.

These are all the fatal cases which occurred on board the Wilberforce, in the Niger, or connected with our visit to that river; and I believe that nearly the whole of those which were observed among the other vessels might be traced to a similar cause. The number of cases of fever which occurred between the 1st August and 31st December, in the Wilberforce, including secondary attacks and agues, which all terminated happily, with the exception of the eight cases mentioned above, was seventy-two.

The disease was most treacherous in its character throughout its entire course; a delusive cessation of all unfavourable symptoms, and the promise of a speedy amendment, having been repeatedly observed to be followed by an exacerbation which too frequently ended in death. It was no respecter of persons,—the young, the robust, and those who to all appearance possessed unbroken constitutions, seemed as liable to its attacks as any; and those who had in various instances before successfully braved the African coast, and other sickly climates, did not escape.

It appeared to me that those who totally abstained from wine and spirits, as well as those who indulged immoderately in one or other or both of these, were more susceptible to attack, and that of a more virulent kind than those who were in the habit of partaking of wine in moderation. At least it so happened those who escaped the best in the Wilberforce, belonged to the latter class.

Acclimatization.—Those persons who have been once affected with fever, in an intertropical country where it is endemical, are generally considered as *seasoned*, and are held to enjoy immunity to a certain extent from repetitions, or rather from severe attacks of the disease. It is common enough to hear persons in tolerable health saying, that they had had an attack of fever on the evening before, and speaking of it as a matter of common occurrence and little moment. Many persons who have resided long in tropical countries, become more or less emaciated, pale, and somewhat cadaverous in their appearance; yet they, for the most part, enjoy good health, and consider themselves acclimated. I can easily conceive that the system should become accustomed to the peculiarities of the atmospheric medium in which it exists, and that the various functions of the body should be performed, so that one may compensate for the increased or diminished action of the other. Still I see that acclimatization is by no means complete; the acclimated of intertropical countries acknowledge, that they suffer attacks of fever even from very trifling causes, such as moving out of a heated room, or any other casual circumstance. These attacks, it is true, are little regarded, but total exemption is certainly of rare occurrence.

The system of one acclimated by long residence in a hot country, has, nevertheless, very certainly undergone a change. Such an individual enjoys tolerable health in his new country, and performs his various duties with some activity. Remove this person to his native country—to his father-land, and he becomes miserable, and very frequently soon dies. It should also be remembered, that most persons of long residence in hot climates grow remarkably careful of themselves, and have not the same energy as those just arrived from European countries. Resident merchants, clerks, and others, only take exercise about sunrise and sunset, and remain in a state of comparative quietude during the day, their duties requiring little exertion. The newly-arrived European, on the contrary, must ride, or shoot, or botanize, or geologize, at all times and seasons, late and early, and under the noon-day sun.

As to secondary attacks in the Wilberforce, they were mostly caused by some imprudence, or by unusual fatigue; and, although in many instances, for the first two or three days, they were equally severe with the primary attack, yet they soon subsided into convalescence, and perfect health was speedily recovered. It is deserving of remark, that the relapses frequently occurred in situations far removed from any supposed malarious district. Those who had suffered from fever once, certainly exhibited renewed but slighter attacks of the same kind, which were called forth by any exposure to solar influence, to atmospherical vicissitude, and even to recurrence to their usual occupations if requiring exertion.

No line could be drawn as to primary susceptibility to fever ; for, as previously stated, the young, and those possessed of the highest physical strength, the temperate and intemperate as well as the totally abstinent, the spare and the plethoric, the tall and the short, the nervous and the sanguine, the fair and the dark, the healthy and the unhealthy in appearance, were found in the list of victims, as well as among those who escaped in the present expedition.

The more advanced in age, however, who had been for a longer time accustomed to unhealthy climates than the juniors, were probably less susceptible to attack ; but if attacked, the relative mortality among them would probably be found greater than among the less advanced in age. The numbers in the expedition to the Niger are too limited to enable us to draw general conclusions in regard to these particulars. A reference to the accompanying Tables will show the ages, temperaments, stature, general aspect and previous service of all the parties who were attacked with fever among us; but investigated minutely, I fear no other result will be come to, but that which is stated above, unless perhaps it be more favourable to the influence of acclimatization; for out of four medical officers who died, I believe three had never before been out of Britain; and of the six persons belonging to the Wilberforce, who died on board of her, four had scarcely left the English coast previously.

It should likewise be taken into consideration, that most of the persons accustomed to tropical countries had, previously to joining the expedition, spent some time in England, and by this means probably had again rendered themselves more liable to the effects of the hot climate.

The old resident in intertropical countries very constantly suffers most severely during the prevalence of rains, and declares this to be the most sickly period. The more recently arrived from Europe, on the contrary, are principally affected in the dry, hot season, usually passing through the wet season without suffering much from disease. The native Africans themselves fall sick in the rainy season, like the old resident European, and in the dry season, feel themselves healthy. Accordingly, while the whites were nearly all affected with fever at the confluence of the Tchadda and Niger, the natives were perfectly well. But previously, when the vessel was wooding and watering during the rainy season (July 1841) at Grand Bassa and Cape Palmas, many of the Africans were affected, whilst the Europeans, generally, enjoyed good health.

It is undoubted that alarm and despondency are powerful auxiliaries in the production of disease. Confidence and courage, however, are no preservatives against its inroads. In the present expedition, the crews generally entered the river in high spirits and with anticipations the most sanguine ; many expressed a determination to keep off fever, and considered their constitutions as capable of withstanding any of the usual causes of disease; even when attacked, patients mostly stated their conviction of the trivial nature of their ailment, and said they should again be well on the morrow. The influence of exposure to the sun's rays, however, appeared to be all-powerful in exciting the disease; he who was much exposed, was sure to suffer; the few who escaped, probably owed their exemption to their duty not requiring them to be much or frequently in the sun, and to having been more careful than the rest. I only remember a single instance in which exposure to the sun was constantly braved without being followed by attack.

With regard to the fever which has been celebrated as occurring in the Island of Walcheren, the Pontine Marshes, the Lincolnshire fens, &c., I take it that the dank atmosphere of such localities only predisposes the body to be acted on by any of the immediate exciting causes of the disease which I have already enumerated,—fatigue, anxiety of mind, the sense of disappointment, want of sufficiently nourishing food, of proper clothing, exhaustion, and drunkenness. Wherever we observe both the predisposing and the immediate or exciting influences present in great vigour, as they certainly were in our army at Walcheren, the disease which arises is always of an epidemic nature; it is under such circumstances that we hear of 30,000 men being attacked with fever, and 8,000 or more falling victims to its virulence.

That fever arises from some agency acting universally, although with greater intensity in one locality than in another, appears evident enough from the striking similarity in its phenomena which the disease exhibits in very dissimilar climates. Under the blue skies of the Mediterranean, many of the symptoms are precisely similar to those experienced on the coast of Africa and in the Niger. One of the most remarkable of these points of resemblance I may instance as occurring in the complete remission on the third day with the exacerbation and great increase of all the dangerous symptoms as evening advances. This feature is particularly mentioned by Sir W. Burnett in his graphic delineation of the remittent fever of the Mediterranean, and the same thing was almost invariably observed in the course of the Niger expedition.

It is my deliberate opinion that if proper care were to be taken by Europeans on their removal to tropical climates, the system would soon become accustomed to the change; that were all the exciting causes of fever to be avoided, Englishmen might there continue to enjoy tolerably good health; the predisposing causes of disease are undoubtedly there, and cannot be escaped; but all my observations have satisfied me that it is only when these are aided by the immediate exciting causes, especially exposure to solar influence, that they become effective, and induce now isolated cases, now epidemic visitations of disease, according to circumstances.

Let us hope, with Mr. Martin, that the time is passed when the reproach shall be applicable to us of not only exposing ourselves to the worst climates, but also of adopting habits of life the least calculated to enable our constitution to become accommodated to the new circumstances under which we are placed. If we compare the accounts given us of the remittent fever of hot climates, whether it be of Cadiz or Gibraltar, Sicily or Sardinia, the East or West Indies, or United States of America, with that of Sierra Leone and the Bights of Benin and Biaffra, we shall find that it is one disease which prevails in all these different localities, exhibiting symptoms which differ in degree only according to circumstances. The usual meteorological phenomena, common indulgences, mental excitement under ordinary circumstances, &c. are familiarly known to overturn the healthy balance, and induce disease. How much more certainly will unusual meteorological states, extraordinary indulgences, mental excitement, &c. in unwonted circumstances, have a similar effect!

Dr. Holland gives it as his opinion in his late very interesting work, " Medical Notes and Reflections," that one of the most certain results of future research will be to associate by the connection of common causes many diseases which are now regarded as wholly distinct in their nature, and arranged as such in our systems of nosology; and considers that fever will by and by be found the bond which links together numerous forms of disease. I fully coincide with Dr. Holland in these views, and believe that future inquiry will go far to confirm the suspicion that the type and manifestation of all diseases are more or less identical. The study of the mode in which diseases originate, involves a consideration of all that links man with the external world, with the different physical agencies in especial, such as variations of temperature and moisture, and as a consequence of these, diversity in the electrical condition of animate and inanimate matter, altered chemical affinity, &c. Not only may fever, but gout, cholera, scurvy, all eruptive complaints, and indeed the greater number of diseases or deviations from the normal condition, be viewed as restorative efforts on the part of nature.

During the prevalence of the fever at the Confluence of the rivers Niger and Tchadda, it was proposed at one time to remove the sick from the vessels to some of the neighbouring hills, with a view to their being placed beyond what was held the deleterious influence of the river. Mount Stirling, as the elevation that was most accessible, and the locality on which the model farm was erecting, was proposed for this purpose. Mount Stirling is about 400 feet above the level of the stream ; but opinions were divided between this height and Mount Pateh, the greatest elevation in the immediate neighbourhood, rising about 1167 feet above the stream, and 1300 above the level of the sea. The general aspect of these hills was very inviting ; for they were free from luxuriant vegetation and swamps, and the soil was a conglomerate of ferruginous sand-stone. But the project was not carried into execution. Whether the removal of the sick to either of these localities would have been attended with benefit, therefore, remains a matter of conjecture; but most probably the fatigue which would necessarily have been occasioned by such a movement would have counterbalanced any beneficial result which might have occurred, supposing always that the locality had been found to prove salubrious.

At present, in fact, we have no sufficient data on which to conclude in regard to the healthy or unhealthy nature of any particular place, beyond those which are so dearly obtained from experience, and any attempt to predicate on this subject will most likely be found futile. Particular spots have repeatedly been selected, from their agreeable appearance, and their presumed possession of many recommendations in the shape of altitude, comparative freedom from swamp and jungle, distance from woods, and other supposed sources of mortality, which have, nevertheless, been subsequently found to be most pestilential. An elevation, less than 2000 feet above the level of the sea, it would seem cannot be depended on as likely to prove salubrious. The Army Medical Records have demonstrated this fact most completely. Stoney Hill, in Jamaica, for example, is 1360 feet above the level of the sea, and there are no marshes nor swamps near it; yet in 1825, when the country was parched with drought, nearly one half of the force stationed there was cut off by fever. Fort George, in Trinidad, 1100 feet high, has been abandoned from its unhealthy nature.

Morne Fortuné, in St. Lucia, 850 feet high, has been found very insalubrious. At Prince Rupert's Bay, in Dominica, barracks were built on a point of land composed of two hills, one 600 feet, and the other 500 feet, in altitude, with a valley running between them. The troops were stationed alternately in the valley and on the hills, but with the same destructive result, as almost every one died. This garrison was finally abandoned. Morne Bruce, in the same island, 456 feet high, on the summit of which the present barracks are erected, is also very unhealthy. Fort Charlotte, Nassau, one of the Bahamas, is built on the highest part of the island, about 120 feet above the sea. This spot was found so deadly, that new barracks had to be erected; these are nearly on a level with the sea, and the mortality is low. In fact, elevations of three, four, five, or six hundred feet have frequently been found more pestiferous than the marsh itself. I have been induced to enter on the consideration of this subject, from the idea which still very commonly prevails in regard to the superior salubrity of elevated spots over those of inferior altitude; most persons, indeed, seem to consider themselves capable of deciding at once from mere personal inspection on this very important question, which is in truth one of a most difficult nature.

Although the proposal to remove the sick to Mount Stirling was not carried into effect, then, yet another, that of immediately conveying them down the river to the sea, was put into execution on the 19th of September, on the supposition that the change would exert a favourable influence upon the febrile disease so extensively prevalent at this time in the ranks of the expedition.

In support of this movement, many eminent authorities can be cited. Dr. Lind says, that the first step to be taken when epidemic sickness prevails, is to immediately remove those who are attacked as far as possible from the original source of the sickness ;—for when a person is seized with a fever proceeding from the bad air of a country, his illness, while he continues there, is daily, nay hourly strengthened by the constant application or re-inoculation as it were of the morbid cause, and remedies, so long as an unhealthy air is breathed, must be expected to prove ineffectual.

Dr. John Hunter entertained a similar opinion, for he says, a voyage to sea seldom or never fails to procure a considerable temporary amendment. Notwithstanding the testimony of men so respectable as those quoted above, I was induced, from circumstances with which I was acquainted, and which will be given below, not only to question the certainty of benefit from such a course, but to maintain that a contrary effect would, in all probability, follow from acting upon it. I, therefore, gave it as my opinion that no good would be done by sending the sick down the river, in opposition to the very prevalent idea which existed, that change of air and the sea breeze would exercise a powerful restorative influence on those affected with fever. In corroboration of my views, I instanced H. M. S. Bann, which remained at Sierra Leone for upwards of two months in perfect health, until the 25th of March, 1823. On that day, a case of fever, the first that had presented itself, occurred. On the 27th the vessel sailed for Ascension; but fifteen persons had died of fever before she reached that island, and nineteen afterwards fell victims, although every precaution was taken to prevent the spread of the disease. I farther brought forward the instance of H.M. brig Harpy, which left the West Indies for the coast of Africa on the 29th of September, 1837. She remained ten days at Sierra Leone, and again set sail for Barbadoes. About the time of leaving Africa, or immediately after doing so, some cases of fever occurred, and before arriving at Barbadoes, nearly every individual in the vessel, both officers and crew, had suffered from fever, and about one half of them had died, including the commander, second master, and assistant surgeon. Numerous other examples of a similar nature might be given.

Another consideration which deserved attention was this, that by sending away the greater portion of the people, the efficiency of the vessels would be destroyed, and their safety perchance compromised, whilst great additional fatigue would necessarily devolve upon those who were left; whereas, by keeping the sick where they were, many would recover and be in a condition to do duty, while the remaining portion might be falling sick in their turn, which was actually the case in the Wilberforce, some having returned to duty before the vessel left the Confluence. It was also certain that many of the patients affected with fever were in a most unfit condition to undergo any exertion, and that their removal from their own ship — from their own messmates—into a crowded vessel with strangers, was calculated to produce any thing but a favourable result, more especially as the disease, as it then prevailed, was accompanied by excessive prostration of strength. Again, whether the atmosphere of the Niger, below Mount Stirling, would now be found more salutary than that higher up the river, was yet to be determined ; and some days, at all events, must elapse, before any vessel could be beyond the influence of the Delta, when in all probability the serious cases would have terminated either in death, or have advanced towards recovery. That the disease would advance and run its course in those who had imbibed the poison, was to be expected from the history of the Bann.

It was finally resolved, however, that the sick were to be sent down the river, and the Soudan, on the 19th of September, weighed and proceeded for the sea, having received thirteen patients from the Albert, in addition to twenty of her own, to which number six more were added before she reached H.M. Brig Dolphin, off the mouth of the river. Five cases were also sent from the Wilberforce at their own request, three of them being slight attacks and in the first stage, the other two more severe.

Notwithstanding the short period in which the Soudan succeeded in reaching the sea, viz., two days, four cases terminated in death, either in the river, or between its mouth and Fernando Po; eight more terminated fatally on board the Dolphin, on her passage to Ascension.

We are therefore warranted in concluding that the removal was not attended with the benefit which was anticipated from the sea breeze, and which has been so strongly insisted on by the distinguished authors before quoted. I have been induced to discuss this subject, in order that should any circumstances of a similar nature again occur, the result of this trial may be known.

The symptoms of the febrile disease were irregular, and appeared to depend very greatly on the constitution of the individual attacked, and on the nature of the exposure to which he had been subjected. The disease frequently advanced at first very insidiously, the symptoms of derangement being greatly diminished, if not altogether absent, in the morning, but returning greatly increased in violence as evening advanced, so that many, who in the early part of the day made little or no complaint, were labouring under a considerable degree of febrile excitement before night; at its commencement, the disease sometimes partook of the intermittent type, it then gradually became remittent, and occasionally merged very nearly into the continued form; or otherwise, it was sometimes evidently remittent at its commencement, and changed into the intermittent type as it approached its termination, and the patient became convalescent. Many were merely indisposed for several days, before more decided indications of serious disease made their appearance. The usual complaint then made was of feelings of debility, and want of appetite, with derangement of the stomach and bowels—either constipation, or diarrhœa. Then came a severe splitting head-ache, and intense heat of skin, with pain in the chest, a dull uneasy sense of oppression there, and sometimes slight cough, followed by nausea, and vomiting of bilious matter. In some cases, even at a very early period, the countenance looked livid or dusky, and there was a dark areola around the eyes. The pulse was generally found quick and small; it was seldom full and bounding, or such as would have warranted depletion; in the course of the disease, the pulse frequently became slow, with remarkable intermissions. There was also at times partial retention of urine, requiring the use of the catheter. Generally on the third day, the symptoms were greatly increased in violence, the speech becoming altered and faltering, and the thirst being most intense. On feeling the pulse of the patient at this time, a hot uneasy sensation remained in the fingers, which could only be effectually removed by washing.

In some instances, the fever made its appearance suddenly, the person attacked having been previously in good health,—all the functions regularly performed, the tongue clean, the bowels discharging their contents with their accustomed regularity, the skin cool and perspiring; in a word, no appreciable derangement up to the hour of the seizure. The first anomalous sensation that was complained of in these cases was a feeling of numbness, or of creeping from the back and loins down the thighs, accompanied with great prostration. This was shortly followed by severe head-ache, and a sense of constriction behind the orbits, a flushed face, and suffusion of the eyes; the skin at first was dry, but it was afterwards covered with perspiration. Seen early the next day, the patient probably expressed himself free from all feelings of illness,—he had slept tolerably, &c.; but towards noon, the symptoms of the preceding day again made their appearance, and with increased violence, the fever being concentrated, as it were, and at night being accompanied by delirium. The heat of the head was now found to be singularly elevated; heat seemed to be generated faster than it could be dissipated by any evaporating lotion. The stomach and bowels always became deranged at an early period; the tongue was either coated, or dry, brown, and glazed; there was vomiting of bilious matter, sometimes yellow, at other times greenish, or dark green; the bowels were either relaxed or confined, the discharges from them when they occurred being black and very fetid. Pain was also very commonly complained of in the regions of the ileum and colon, as well as a peculiar burning sensation in the stomach; occasionally yellowness of the skin and conjunctiva was observed, and in several cases considerable strangury occurred.

Delirium generally of the low muttering kind usually set in from an early period of the disease. Matters continuing to go on unfavourably, the articulation was observed to become difficult, and the voice to falter, it was a mere muttering between the quivering lips; the patient was then seized with tremors and startings, convulsions and coma.

In numerous instances the head was the part principally attacked: the patient complained of feeling great debility, and then of nausea and oppression at the scrobiculus cordis, of stiffness and numbness of the joints generally, at the shoulders, elbows, wrists, &c., or of the loins, hips, knees, and ankles in particular; sometimes a creeping sensation extending from the loins would come on, and the pain of the head would then immediately subside.

Sometimes a patient would be suddenly seized with violent sickness of stomach and complete prostration; in which case the countenance became pale, or collapsed and yellow, the eyes deeply set in their sockets, and the whole appearance that of approaching dissolution; but by and by, reaction set in, and the fever ran its course as in other instances. Occasionally during the remission, as early as the second day, but more generally on the third, a sort of stupor came on, accompanied with a cold and clammy state of the skin, redness or lividity of the face, languor of the eyes, and injection of the conjunctiva, the general surface being all the while perfectly cool. These symptoms were associated in some with a peculiar dropping of the upper eyelid. In most of the cases where this was observed, the disease terminated fatally.

There was commonly a delusive remission of the fever towards morning, and this continued till near noon, promising amendment; but the disease again recurred about this time, and progressed till midnight, to abate as before on the following morning. The accession frequently made its appearance about two or three o'clock in the afternoon, and continued through the night; but as the disease declined, the recurrence of each attack came on later and later every day, and the exacerbations were less and less severe. On the other hand, in bad cases, and as the disease increased in severity and in danger, the remissions became of shorter duration, until they almost entirely ceased.

In many cases the fever was evidently worse on alternate days, a circumstance which was sufficiently remarkable to be noticed by the patients themselves, so that on approaching them it was no unusual thing to hear them speak about their good and bad days, and to find them declaring themselves better or worse, according to circumstances. In some of the more severe cases, after the first remission, no other was very perceptible ; so that, from the third day, the fever and great heat continued with very slight abatement only throughout the attack, accompanied all the while with an inexpressible feeling of exhaustion ; it was nothing unusual for patients to faint on rising from their beds, or making any kind of exertion. In the earlier stages of the disease, this prostration was the more remarkable, for in the interval some patients would declare themselves perfectly well, but on attempting to rise and walk about, they became pale and death-like, and fell prostrate on the deck.

In some, the disease appeared to arise from a powerful impression having been made on the nervous system at the onset, an impression too powerful to be removed by the efforts of nature; for the reaction was sometimes very slight, the arterial system being scarcely aroused, and soon subsiding again. This was one of the most treacherous as well as deadly forms of the malady,—the danger indeed could only be appreciated by experience, for the patient remained quiet, and complained of nothing but debility. The disease in these circumstances for the most part soon terminated fatally.

From the very commencement of the fever, the intellect and sensations were occasionally observed to be greatly perverted; the patients then declared themselves perfectly well, and asked for what reason they were kept in bed, the face being all the while flushed, the eyes starting, and the skin burning. Such patients sometimes appeared happy; they laughed and chatted, and made no complaint but of being confined in their beds; this condition was at times accompanied by great restlessness. Patients would occasionally be seen to labour under various hallucinations, fancying themselves fastened down in bed, &c. These patients required strict watching to prevent them from leaving their bed and jumping overboard, an event which took place in several instances on board the Albert.

From the description which I have now attempted to give of this fever, it is evident that it presented itself under different phases.*

It even maintained its character of irregularity in the symptoms of approaching dissolution; for, whilst in some the violence of the fit abated gradually, the pulse growing slower, and the skin cooler, the intellect also becoming brighter, and no complaint being made, save of weakness and a sense of inward sinking, the patient, to all appearance convalescent, would suddenly become comatose, and die within an hour. In others, on the contrary, where there had been every sign of approaching death for two or three days, the limbs being twitched with subsultus, the patient worn out by hiccup, &c., gradual improvement sometimes took place, a sweat broke out, and under careful and vigilant treatment, convalescence was soon established, and the case did well.

Before leaving this portion of my subject, I have to call particular attention to the state of the tongue, which, throughout the course of the disease, was very remarkable. At first it was in general either thinly spread over with a white film, or covered with a thick raised coating, white, yellow, or brownish in colour. Occasionally, and this was remarked especially in old acclimated persons, the organ was fissured and slimy; but, as the disease advanced, the slime gradually disappeared, and then the surface looked clean and bright, the interstices between the papillæ, which were swelled, looking as if filled up by the oozing of blood; on the application of the finger, however, not the slightest stain was communicated. Frequently this clean, and in some cases, at first glance, healthy looking tongue, suddenly became dry, glazed and brown; but in a few hours, it would resume its former clean, moist appearance, and again as suddenly become dry and parched as before. The bright tongue, characteristic of the advanced stage of the disease, was generally observed to commence with a broad red line in the middle, the edges being still coated; but these cleaning gradually, the whole organ at length presented the same appearance. Whenever the red line in the centre of the tongue was perceived, it was considered a certain indication of the continuance of the disease, and a sign of very unfavourable import. The time required for the tongue to pass through the changes in appearance now indicated, varied with the intensity of the disease; it was short in proportion to the rapidity of the malady; in some cases less than a week sufficed, in others, a month was requisite. Where the fever was masked and creeping under the surface, if I may so speak, the changes in the tongue were less apparent, but equally certain, so that on the approach of dissolution, the clean red tongue also existed.

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* This leads me to remark on the proneness in the present day to draw distinctions between one and the same disease, from some slight disparity in the manifestation of the various symptoms, which is most probably entirely dependent on the nature of the constitution, on the exciting cause, and on the idiosyncrasy of the individual attacked.

The Febris Africana, as it showed itself in the Niger expedition, was seldom accompanied by the dark-coloured grumous discharge, usually known as the coffee or claret ground, or black vomit; at least in all the cases which occurred in the Wilberforce, it was wanting. The yellow skin and conjunctiva, however, were frequently observed.

Although in the West Indies I have repeatedly witnessed extensive alteration of structure and disorganization after death, from bilious remittent fever, in the destructive malady of the African coast, little in the shape of appreciable deviation from the normal condition was discovered. An inflammatory and congested state in some portion of the stomach, either about the cardiac or pyloric orifice, and an appearance of the same kind about the cœcum, extending upwards to the ileum, and down to the colon, were the principal morbid changes encountered. Some enlargement, and probably commencing ulceration of Peyer's glands, were also commonly enough observed. The gall bladder was usually distended, and its duct often seemed obstructed. The organ, however, that deviated in the greatest degree from the healthy condition was the spleen, which was commonly enlarged and pulpy. Such is the morbid anatomy which I found in connexion with this insidious and dangerous malady, which almost makes good the old maxim, Medicina non agit in cadavere.

While the yellow fever of the West Indies is generally of the inflammatory type, with great excitement throughout the attack, that which we see in Africa seems more commonly to be characterized by a complete exhaustion of the nervous energy, which is recruited again only to become similarly depressed in the next paroxysm.

M. Louis represents the liver as the only organ that constantly presents a particular pathological condition, different from aught observable in any other disease, and which must therefore be looked on as constituting the anatomical character of yellow fever. This condition consists in a remarkable dryness of the organ, accompanied by an alteration of its colour,—it looks blanched, and sometimes has the hue of fresh butter or straw, of gamboge, mustard, or an orange, in different cases. In the few cases which I examined, the liver certainly did present a dry and blanched, or yellowish appearance; but I cannot agree with Louis, in concluding that it is only in yellow fever that this condition presents itself, having frequently met with it in the numerous necrotomic examinations made in Greenwich Hospital, while assistant-surgeon of that establishment. In considering the cause of death in yellow fever, Louis has remarked, "that observation shows there is in disease something beyond what we see, and that its *cause* has sometimes a great deal to do with the fatal issue, the cause often appearing to kill by itself, and independently of appreciable alteration of the organs, and even up to a certain point, of apparent derangement of the functions. It results from this, that if an intimate knowledge of the lesions observed in subjects dying of yellow fever is indispensable to the practitioner, he must also remember, that in this disease, as in so many others, there is something to be considered besides these lesions, and that he must profit by all which experience or chance may teach him of the best mode of treatment."

Treatment.—In the treatment of a disease in which a change from a state of violent excitement to one of complete prostration takes place in the course of a few consecutive hours, the greatest caution is indispensable. It would indeed appear to be the result of experience, that any thing like activity, whether depletory or in the way of stimulation, was equally attended by an aggravation of the malady. Although the practice about to be recommended will probably be viewed by the advocates of either of these remedial plans as weak and wanting in energy, still, the true value of every therapeutic means can only be known by the results of its application, and to this I confidently appeal.

In dealing with the African fever, I soon discovered that the efforts of the practitioner were best directed when they were used simply in assisting nature to overcome the disease. In the course of my service in the West Indies, I had been in the habit of employing blood-letting freely in conjunction with cold affusion, and warm bathing in the treatment of fever. These means I tried at first in the African disease, but not having found them attended by the success I had anticipated, I very speedily gave them up entirely. To this I was the rather inclined, from finding the general opinion of practitioners in Africa decidedly opposed to depletion by blood-letting; Mr. Boyle, for many years colonial surgeon at Sierra Leone, in particular, has stated, that he scarcely ever saw a man recover who had been blooded; and my most deliberate opinion now is, that in the fever of tropical climates, bleeding may be carried to a very great extent, with no other effect than to cause reaction after each repetition of the process:—nearly the whole of the vital fluid may be removed from the body without the febrile excitement being subdued. Where derangement of the chylopoetic organs is obviously present, the stomach ought to be emptied of its contents, and spasm of the hepatic ducts, if such exist, removed by the exhibition of an emetic; patients generally expressed themselves greatly relieved by its operation. A scruple of calomel, followed by a dose of castor oil, is next to be administered, with a view to clearing out the bowels. Should this not have proved efficacious, recourse may then be had to more active cathartics, such as croton oil, till the evacuations are sufficiently copious. These measures were followed up in the earlier period of the disease with doses of from five to ten grains of calomel, combined with three or four of the pulvis Jacobi veri, every two, three, or four hours, according to the urgency of the symptoms, till the mouth became slightly affected, when the medicine was discontinued. In cases where it appeared that the system would not be influenced, or salivation produced by mercury, it was at once relinquished, but even here, it was generally observed, that the gums took on a whitish glazed appearance, after having been somewhat red and swollen, and that, afterwards, some fetor of the breath was perceptible ; this condition, however, could not be increased, nor could salivation be produced, although mercury was persevered in to a great extent. In connexion with the subject of mercury, I think it very important to observe, that in several instances where profuse ptyalism took place, it had not the desired effect of checking the fever ; the disease seemed to continue more severe than ever, and in one case, death ensued, despite the most complete salivation. This is a result which was by no means anticipated, for we had all been led to consider that the new action aroused in the system by the mercury, would certainly counteract the febrile excitement, and thereby eventually secure the recovery of the patient.

Where local congestion, or engorgement existed, sufficient to warrant topical bleeding, or counter-irritation, recourse was had to these measures; particularly to the latter, which was even employed most extensively, and seemed generally to produce considerable alleviation of suffering. The regions principally selected for counter-irritation, were the temples, the nape of the neck, the pit of the stomach, and the surface of the abdomen, according to the seat of any pain or uneasiness; in many of the cases, blisters were applied, again and again, to one or other of these regions, with undoubted advantage.

To allay the irritability of stomach, and to quench thirst, soda water, Seltzer water, and saline effervescing draughts were usually given, acid drinks being prohibited, as they were found to increase the sickness and thirst. The bowels were kept free by the constant use of the sulphate of magnesia administered in a state of effervescence, in which it remained on the stomach; when otherwise ordered, it was always rejected.

The best means of lessening the sense of burning heat which was so commonly complained of, I found to consist in encouraging the natural process of perspiration by keeping the body somewhat warmly wrapped up, while the patient was inhaling the open air, as cool as it could be had;—the sick in the Wilberforce were placed under the awning on the upper deck. So profuse was the cuticular discharge under these circumstances, that the bedding commonly soon became saturated with the excretion.

This plan of treatment was adopted from observing that, when an attempt was made to keep the surface cool by constant sponging with cold water, or vinegar and water lotions, and removing the usual covering, the skin always became dry and parched, and the patient obviously uneasy and nervous. Those, on the contrary, who were treated in the way indicated above, lay quiet and bathed in perspiration, which evidently had a soothing effect on the whole system. On several occasions the warm bath was had recourse to; but any benefit resulting from it was by no means generally apparent. Past experience inclines me to put no greater faith in either the cold or tepid affusion, having always witnessed a greater or less amount of reaction to follow its exhibition, which has seemed to increase rather than alleviate the malady.

Diuretics were found advantageous, especially after the height of the disease. The spiritus ætheris nitrici was the medicine commonly employed, from ♏xxx. to f℥j. being exhibited at night. Latterly the vinum colchici was used rather largely, either alone, or in combination with the solution of morphia, and these remedies were followed by considerable benefit. Still more recently, whilst in the River Cameroons, the plan of treatment with the colchicum was pursued almost exclusively, quinine being administered immediately on the subsidence of fever; these medicines seemed to be eminently beneficial. On the whole, however, the use of quinine was not attended by that success in the febris Africana which was anticipated from its established character.

Any deviation from the strictly antiphlogistic regimen during the progress of the malady, was found to be injurious, even in cases where, from the debility becoming alarming during the remissions, arrow-root and wine were administered, the fever never failed to return with greater violence than before; the same thing happened when quinine was had recourse to under similar circumstances. It was, therefore, only when the disease had passed its acmé, and the patient was excessively exhausted, that I latterly ventured to support the strength by food and wine, quinine, and other remedial agents of the same description. After reaching Fernando Po, however, the character of the disease became somewhat modified, for here quinine could be ventured on with advantage much earlier than in the cases which occurred in the Niger.

Having heard of Warburg's fever drops in my visits to Demerara, in the year 1838, where this medicine was in high vogue, as a specific for fever, I determined, as I had received a package of the remedy before leaving England for Africa, from the proprietor, to give it a fair trial in the river Niger, more especially as an appeal had been made in its favour to the Secretary-at-war by Sir Andrew Halliday, Deputy Inspector-General of Army Hospitals in the West Indies. Sir Andrew Halliday had used, or seen the medicine used, in the hospitals at Demerara, in about fifty of the worst cases of fever, and with the most perfect success. He said that he firmly and conscientiously believed this remedy to be competent to check the progress of the most fatal fevers in all parts of the world, and considered it a matter of national importance that the secret of its preparation should be made known, and its discoverer properly rewarded by the country. I have deeply to regret my inability to coincide in the favourable opinion of Dr. Warburg's drops, expressed by a gentleman of the zeal and experience of the late Sir Andrew Halliday. He would indeed be deserving of the most ample reward who should discover any medicine possessed of power to counteract the deadly influence of the Western Coast of Africa!

One of the first cases in which Dr. Warburg's remedy was had recourse to, was that of Dr. Vogel, the botanist to the expedition, who, by the way, was considered a most appropriate person on whom to make trial of the *vegetable* drops.

The stomach and bowels were first emptied, and the preparation then administered according to Dr. Warburg's directions. It soon produced drowsiness and sleep. Next day the patient complained of head-ache, flushed face, and constipation, when a saline aperient was given; on the succeeding evening great restlessness and high fever came on, and there was nothing left but to have recourse to mercurialization; this also failed in checking the fever, which continued most severe up to the patient's landing at Fernando Po, on the 5th of October, thirteen days after the exhibition of the drops.

Case 2. Mr. Garritte, æt. 22, third engineer, was affected with fever on the same day as Doctor

Vogel, and was similarly treated. He complained of pain in the head, with vertigo, restlessness, constipation, and great debility, for upwards of a month, but these symptoms gave way to blisters and other appropriate treatment.

Case 3. Henry Rosemergy, æt. 21, sapper and miner; affected with fever, and treated with the drops. Here also the fever returned the next day after the remedy had been given, and the patient continued most dangerously ill for a fortnight afterwards; he was one of those whose life I despaired of saving; however, he ultimately recovered.

Case 4. Richard Smitheys, æt. 21, gun-room steward. This patient was certainly better on the next day after the drops, but he complained of great uneasiness in his head and debility; towards evening, too, the fever again made its appearance, with splitting head-ache and great restlessness, and continued for upwards of a fortnight, when it gave way to quinine and other treatment.

Case 5. William Martin, æt. 29, corporal of sappers. Here the remedy appeared to be more successful than in any of the previous cases. On the next day the patient was better, but he complained of a dull pain in the head, and languor; the face was tumid and purple ; however, in about a week he went to duty.

Case 6. The last case was that of Mr. Woodhouse, assistant-surgeon, who, having had a slight attack one evening, had recourse to the remedy; he was better the next day, but had repeated slight attacks afterwards, and ultimately died of fever at Fernando Po.

With regard to specifics in the febris Africana, then, it may be very safely said that at present we have none; for mercury, which has hitherto been viewed by many as the sheet-anchor, has entirely failed in the river Niger; blood-letting has been declared highly injurious; quinine has equally been found abortive in the early stages; and as for the drops of Dr. Warburg, (probably composed of morphia and quinine,) they, too, have proved a total failure. The practitioner is therefore left to the resources which sound medical principles, good sense, and experience, may suggest, and the symptoms of the disease require; probably the best and safest practice of all will be found to consist in that which simply endeavours to assist nature in those efforts that tend to the patient's improvement, and to check those that tend to his destruction; by attempting to take the enemy by storm, we should too frequently, I fear, do more harm than good.

Contagion.—Emanations from the body of those who were labouring under fever of a bad character, have been very commonly observed; and it is quite certain that a strong and somewhat ammoniacal odour was emitted during the progress of the disease which occurred in the Niger expedition, from the persons of almost all the patients attacked; yet in no instance were there any grounds for believing that the fever was contagious; not a single case occurred that could reasonably be suspected to have arisen from contagion.

The doctrine of contagion, I cannot help taking this opportunity of stating it as my conviction, is one of the most gloomy and dangerous that was ever inculcated. If proper regard be had to ventilation and cleanliness, the emanations from the body will certainly not excite fever in any one; the real cause of the disease is as extensive as the atmosphere itself; epidemics always make head, and are propagated, despite the strictest sanatory and quarantine regulations.

Prophylaxis.—As to the best means of warding off the attacks of the African remittent fever, while employed on the coast, which may with great propriety give name to the disease, (for it differs somewhat from that of other hot countries,) there is no doubt that in addition to ventilation and cleanliness, which are altogether indispensable and primary measures, much stress deserves to be laid on employing the people regularly, short of fatigue; on keeping up their spirits, and furnishing them with amusements; on guarding against their exposing themselves to the sun's rays, or the rain; on supporting the constitution by nutritious food,—in short, by doing every thing that may conduce to maintain the mind and body in a state of high health. On the other hand, depress the spirits of the people, work them hard, expose them to the sun and rain, stint them in their food, and allow them opportunity to indulge in intoxicating liquors, and the result will be most disastrous.

Statistical documents show that longevity evidently is in proportion to the happiness enjoyed. Let us receive ill tidings, let any melancholy intelligence be conveyed to us, and the stomach immediately sympathizes with the brain; our appetite is gone, nutrition is disturbed. This was observed long ago; for Shakspeare puts into the mouth of Henry the Eighth, when desiring Wolsey to read certain papers, the well-known sneering remark, "and then to breakfast with what appetite you may."

When we look to the results of digestion, when we remember that this is a process for assimilating with our bodies heterogeneous substances, of transforming into blood and endowing with life, or of rejecting as useless whatever is lodged in the stomach, it reminds us of the importance of paying attention to the supply of proper materials, of that which possesses suitable nutriment to support the expenditure caused by the wear and tear of life.

It was wisely ordered that preserved fresh meat should be supplied to the crews during the Niger expedition, two or three times in the week, with other auxiliaries, as coffee, (a cup of which was served out the first thing in the morning,) and after entering the river, a glass of sound Teneriffe wine, with quinine, was given each day; pickled cabbage, cranberries, &c., were also occasionally supplied, as additional aids to all the other well-contrived means for preserving the health of the people employed upon what was by sad experience held to be very perilous service. In the vessels employed upon the Niger expedition, peculiar care had been taken to keep the various holds and store-rooms of the vessels sweet and clean; each having been fitted-up with Dr. Reid's ventilating and medicating apparatus, which was kept in full operation, and from which much was anticipated. My views regarding this apparatus having been expressed to Capt. W. Allen, I shall take the liberty of here inserting the communication which I made to that excellent officer:

H. M. Ship Wilberforce, Ascension,
January 14th, 1842.

SIR,

Having been requested to state to you my opinion of the medicator, with regard to its usefulness as a prophylatic agent, I beg to acquaint you, that from the period of our entering the river on the 20th of August last, it was constantly employed, especially at night, quick lime being the principal purifying medium to which the air was subjected; the muriate of lime supplied did not seem to be constantly required, the atmosphere at this period being comparatively free from humidity, unlike that experienced in our progress along the coast. Supposing the chemical substances recommended to be really efficacious in destroying the malaria, or miasm, which produces fever, it appears to me that in order to carry out fully the project of purifying the atmosphere, intended for the respiration of the persons employed on board, the vessel should be rendered air-tight, (which would most probably be found both dangerous and impracticable,) and no other atmosphere permitted to circulate through the ship but that prepared and distributed by the medicator; whereas, at present, the air below only is subjected to purification, and that imperfectly; while on deck, where the officers and people are employed, the malarious air of the locality remains unaffected. Again, to command sufficient *materiel* wherewith to purify the atmosphere for any length of time, say a few weeks, or a few months, one "tender" at least laden with the requisite supplies, should accompany every vessel; or the various dock and victualling yards should have pneumatic stores ready to be shipped in addition to their present stock of bread, beef, pork, wine, &c. Farther, on any person leaving the vessel, he ought surely to carry with him a supply of purified air, otherwise his passing from the ship to the atmosphere of the shore might be most disastrous. Finally, supposing all this carried out to the fullest extent, I am of opinion that it would prove totally inadequate to prevent the malignant fever, which is found so destructive along the African continent; for this malady I consider not to depend on any agency capable of being removed by the substances at present proposed for this purpose. However, should it be considered advisable to purify the air at any time, in consequence of the prevalence of disease, or other circumstances, the chemical substances for absorbing humidity, removing carbonic acid, destroying sulphuretted hydrogen, and other deleterious gases, may, I conceive, be employed in a more simple manner, either on deck, or below, and without the assistance of the cumbrous medicator, the space occupied by which is a very serious consideration in a small vessel. It is undoubted that ventilation in all crowded places, whether on shore or on ship-board, is highly conducive to health, and any efficient means for carrying this object into effect must be hailed as of the most vital importance. I cannot, Sir, permit myself to conclude this letter without observing that, notwithstanding the failure of the medicator in the prevention of fever, I consider the ingenious and novel attempt to effect this object as highly creditable to its talented projector.

I have the honour to be, Sir,
Your most obedient servant,
MORRIS PRITCHETT, M. D.

To William Allen, Esq. Commander of
H. M. S. Wilberforce, and Senior
Officer of the Niger Expedition.

Having in the first portion of this work spoken of the influence of moisture in producing disease, it may be supposed that in removing humidity, we do much towards the preservation of health. My own opinion is, that in tropical countries, this point is one which cannot be too strongly insisted upon. In a wet season, with constant rains, to keep a ship dry will probably be found impossible; a slight approximation only to this result will then be attainable. Stoves placed in different parts of the ship will probably be found the best means of keeping her dry; in steam vessels, the heated air of the engine-room, as was first practised in the Wilberforce, at the suggestion of Capt. Allen, may very advantageously be conveyed to various parts of the holds, &c. With regard to chemical substances, I do not think they will ever be found to answer the object proposed in their employment.

Great care should at all times be taken to keep the surface of the body as much protected against the more immediate application of the damp chilling air, as is compatible with convenience. At present flannel is the covering generally adopted, but probably an envelope of silk will be found not only more agreeable, but also more efficacious for this purpose than any other. Spun silk under-clothing should, I think, be universally adopted by invalids in all climates; its cost I fear will prove a barrier to its general adoption; but to those whose means enable them to make use of this material, it will be found from its non-conducting properties a most valuable additional means of preserving their health.

Some general orders having been issued by Capt. Trotter, with a view to preserving the health of the people employed in the expedition, I shall, with his permission, here introduce as briefly as possible so much of them as relates to the ventilating apparatus, and to the clothing, diet and accommodation of the people, to show how anxiously everything was cared for that was thought likely to preserve them in good health.

Ventilation.—"The apparatus is to be used frequently, and the rules and suggestions contained in

Dr. Reid's paper are to be followed out in every particular.

"The power of the fanner is to be frequently tested, —1st. In producing a circulation of air introduced into the vessel directly from the external atmosphere. 2nd. In propelling the heated air of the engine-room into the hold and various compartments, as was first practised in the Wilberforce. 3rd. As connected with the medicator or purificator. 4th. In connexion with the tubular heating apparatus attached to the purificator, or simply connected with the external tube leading to the fanner.

"Dr. Reid's general rules are not only to be strictly attended to every day, but one hold is to be examined daily, (excepting on Sundays,) and the state of the air reported by the surgeon to the commander, in order that every compartment may come under particular inspection during the week.

"The hold of any compartment suspected of being unwholesome, is as soon as possible afterwards to be completely cleared out, and thoroughly dried and ventilated, and its state afterwards noted in the log-book, when the names of any articles are to be mentioned which may be considered to have caused the unwholesomeness. The surgeon is also to draw up a particular report on such occasions.

"*Solar exposure and evening dews.*—As the hottest hours of the day are comprehended betwixt eleven and three o'clock, the white men should be exposed to the sun as little as possible during that period. Exposure on shore, in Africa, to the morning and evening dews, and the night air, having proved even more prejudicial to health than the intense action of the sun's rays, no white person belonging to the expedition after arrival on the coast is to be on shore between sunset and an hour after sunrise, unless with my permission, or that of the senior officer present, who is not to grant it unless when duties are unattainable at other times; and care must be taken by the respective commanding officers that unavoidable exposure of the white men on shore at night be reduced to the least possible amount.

"The above precautions are considered necessary on the coast generally, but more especially in the Delta of the Niger, where the exciting causes of disease are to be regarded as acting with increased energy, and all possible means are to be used for the purpose of obviating their injurious effects. It is to be hoped that the climate above the Delta will be found to be such as will admit of this restriction being modified.

"Boats or canoes going alongside their own, or other vessels, are to be directed to take the shady side in order to avoid as much as possible the exposure of the crews and boats to the rays of the sun.

"*Dress.*—Duck frocks and trousers are to be worn by the white men during the day in fine weather, with flannel next to the skin; each man must also be provided with two broad flannel waist-belts, so that he may be enabled to have a dry one continually round his body. The men's hats are to be of white straw, with a padding or defence of some sort under the crown, to prevent the injurious action of the sun's rays upon the head. The white men are not to be allowed to go aloft without the officer of the watch seeing that they are covered, and that this necessary regulation is attended to.

"The crews are to be mustered before sunset, when white men are to be clothed in their blanket dresses for the night, in addition to flannel clothing underneath.

"While the steam-vessels of the expedition are at an anchor on the coast of Africa and in the Niger, and more especially in the Delta and other unhealthy places, a cup of warm coffee is to be given in the morning to each European whenever the surgeon thinks it advisable, and also to such of the black men as the surgeon may think require it. To make which, one-third of an ounce of coffee, and one-third of an ounce of sugar, are to be issued as an extra allowance.

"As it is most desirable to encourage temperate habits on board the steam vessels of the expedition, especially with a view to the preservation of health, it is my direction that such individuals as do not take up spirits be supplied daily with the established allowance of lemon juice and sugar, except when their allowance of grog shall have been stopped for punishment.

"It is my direction that the issues of the following species of provisions on salt meat days be regulated from the time of arrival on the coast by the following scale; observing that cranberries and pickled cabbage (which are to be considered as an extra allowance) are to be issued only in proportion to the salt meat actually taken up, and that the pickles are not to be served with pork, unless when salt meat shall have been issued the day before:—

Salt Meat Days.	Salt Beef lbs.	Salt Pork lbs.	Flour lbs.	Peas pints.	Pickled Cabbage ozs.	Cran-berries ozs.	Sugar for Cranb. ozs.
1.	¾		¾		1	2	¾
2.		¾		½	1		
3.		¾	¾		1	2	¾
4.		¾		½	1		
Allowance for four days	¾	2¼	1½	1	4	4	1½

"Preserved meats are to be issued to the companies of H. M. steam vessels of the Niger expedition on Sundays and Thursdays, whenever the crews shall have been two days previously on salt meat; or if more palatable to the crew, it may be divided into halves, and served on four days in the week, mixed with salt meat, without interfering with the scale in the last order regulating the issues of pickles and cranberries.

"Wine and quinine may be given to the men occasionally in lieu of wine and bark, and its use may be extended to the whole crew when thought desirable by the surgeon.

"Unless absolutely necessary, the hammocks are not to be piped up in Africa until sunrise, which in the Niger is always about six o'clock, and (when recommended by the surgeon) a cup of coffee is to be given to every man before going on deck.

"The hammocks are to be left unlashed for a quarter of an hour, and then lashed up and taken on deck, and the duties of the ships proceeded with.

"As ill consequences often arise from persons taking large draughts of cold water when thirsty, a *small* measure is always to be kept at the filter or tank used by the ship's company, and no other is to be used by the men in helping themselves.

"The water of the Niger having been found to contain much animal and vegetable matter, ought not to be used for drinking until boiled, and a little lime added to it.

"In case of any of the men getting wet, the officer under whom they have been employed is particularly charged to muster and report them in dry clothing before they are allowed to go below. If the weather is not suitable for the clothes to be hung in the rigging, a place on deck must be pointed out, where they may be deposited.

"As all surfaces giving out moisture by evaporation are injurious to health, open vessels of water, wet clothing, towels, &c. should never be allowed to remain below, nor the crew permitted to wash themselves on the lower deck.

"To avoid as much as possible unnecessary exposure to the night air, the white crew are all to sleep below when on the coast, or up the rivers, and are on no account to be permitted to lie about upon the upper deck.

"The Kroomen alone are to sleep on deck, and every possible measure taken to protect them from the rain. It might be advisable when practicable to fit up boats or canoes, to be moored alongside or astern of the ship, for the accommodation of the Kroomen when the vessels are at anchor, and much crowded on deck.

"As few white men as the performance of the duty will admit of are to remain on deck during the night, particularly when rain or much dew is falling ; those who are obliged to be on deck on duty, will be supplied when in unhealthy localities with respirators, and a fire is then to be kept all night in the cookhouse for their benefit."

TABLE I.

COPY OF THE SICK BOOK

OF HER MAJESTY'S STEAM-VESSEL WILBERFORCE, 1841.

During the Prevalence of the Fever, including One Month previous and Two Months subsequent to its occurrence.

When put on Sick List.	Names.	Age.	Quality.	Disease or Wound.	When put off Sick List.	How disposed of
August 3	Wm. Ford	25	Marine	Febris remitt.	September 5	Duty
— 5	Wm. Martin	29	Corporal Sappers	Diarrhœa	August 6	,,
— ,,	Wm. Jackson	22	Krooman	Colica	9	,,
— 10	Jos. Platt	23	Krooman	Contusio	14	,,
— 12	Jack Andrew	30	Head Krooman	Vulnus	19	,,
— 13	Wm. Rabling	29	Sapper	Contusio	17	,,
— 14	John Jos. Garner	22	Com. Stew. (col.)	Febris remitt.	September 2	,,
— ,,	Mich. Walsh	27	Carpenter's Crew	Ulcus	16	,,
— 22	Geo. Croft	27	Quarter Master	Hæmorrhois	August 23	,,
— 23	Wm. Funge	26	Seaman	Rheumatismus	28	,,
— 28	Tom Gibson	23	Krooman	Contusio	September 3	,,
— ,,	Mr. W. H. Green	23	Second Master	Cephalalgia	August 29	,,
September 4	Jas. Kneebone	23	Seaman	Febris remitt.	September 11, 8 p.m.	Dead
— 5	Wm. Allford	22	Seaman	,,	September 16	Duty
— 6	Wm. Rabling	29	Sapper	,,	September 14, 9 a.m.	Dead
— ,,	Wm. Lucas	26	Boatswain's Mate	,,	September 19	Sent down river in Soudan
— 8	Fred. Gurney	35	Gunner's Mate	,,	October 2	Duty
— ,,	Wm. Innes	24	Marine	,,	2	,,
— 9	Absalom Delavante	50	Interpreter	,,	2	,,
— 11	Jas. Cotter	31	Sapper	,,	September 17	,,
— ,,	Mr. H. C. Toby	24	Mate	,,	October 21	,,

TABLE I. Continued.

When put on Sick List.	Names.	Age.	Quality.	Disease or Wound.	When put off Sick List.	How disposed of.
September 12	Mr. C. G. Roscher	27	Geologist	Febris remitt.	October 4	Duty
— "	Mr. Jos. Webb	22	Clerk	"	3	"
— 14	Mr. Louis Frazer	22	Zoologist	"	January 30	"
— "	Geo. Boyce	22	Seaman	"	October 16	"
— "	Wm. Bailey	22	Cooper	"	17	"
— "	Mr. H. C. Harston	29	Lieutenant	"	September 19	Sent down river in Soudan
— "	Mr. J. E. Terry	23	Commis. Clerk	"	30	Duty
— 15	Tho. Roberts	29	Marine	"	November 14	"
— "	Henry Collins	25	Blacksmith	"	October 6	"
— 16	Edwin Hoskin	22	Purser's Steward	"	September 19	Sent down river in Soudan
— "	John Wilson	20	C. Cook	"	October 2	Duty
— "	Jas. McClasky	22	Stoker	"	17	"
— "	Peter Fitzgerald	27	Stoker	"	2, 12 a.m	Dead
— "	Sam. Hill	29	Marine	"	10	Duty
— "	Mr. W. Simpson	50	Commis. Clerk	"	September 30	"
— 17	Mr. W. Forster	28	Master	"	October 14	"
— "	Mr. C. Wakeham	45	Purser	"	September 27 1, a.m	Dead
— 18	John Osborn	25	Corporal Marines	"	September 19	Sent down river in Soudan
— 19	Rich. James	23	Carpenter	"	September 25	Duty
— "	Wm. Ford	25	Marine	"	September 19	Sent down river in Soudan
— "	Mr. G. Garritt	22	3rd. Engineer	"	October 23	Duty
— "	Henry Hillier	23	Carpenter's Mate	"	September 19	Sent down river in Soudan
— "	Dr. T. Vogel	30	Botanist	"	October 5	Sent on shore Fern. Po
— "	Dan. Bloomfield	24	Marine	"	September 21	Duty
— "	Wm. Jackson	22	Krooman (colour.)	"	20	"
— 20	Wm. Ward	32	Quarter Master	"	22	"
— "	Mr. J. Graystock	37	2nd. Engineer	"	October 31	"
— "	Mr. W. Bowden	52	Purser of Albert	"	17	"
— "	Mr. G. B. Harvey	32	Master of Albert	"	2 8, a.m.	Dead
— "	Mr. H. Collman	36	Assist. Surg. Sou.	"	October 5 12, a.m.	"

September	21	Wm. Martin	29	Corporal Sappers	Febris remitt.	September	29		Duty
—	„	Jos. Hopkins	35	Sail Maker	„		25		„
—	„	Wm. Funge	26	Seaman	„	October	17		„
—	23	Rich. Smitheys	24	Gun-room Steward	„		31		„
—	24	John Waddington	30	Quarter Master	„	September	30		„
—	26	Geo. Cuthbertson	38	Serjeant Marines	„	October	11	8, p.m.	Dead
—	„	Henry Rosemergy	21	Sapper	„	November	4		Duty
—	28	James Case	30	Seaman (coloured)	„ intermitt.	October	8		„
—	„	James Dennis	26	Krooman	„		8		„
—	30	Mr. W. H. Green	23	2nd Master	„ remitt.		25		„
—	„	Wm. Allford	22	Seaman	„ intermitt.		8		„
October	2	Jas. Carr	26	Stoker	„ remitt.		4		„
—	3	Geo. Croft	27	Quarter Master	„	November	7		„
—	5	Mr. J. Webb	22	Acting Purser	Phlegmon	October	26		„
—	7	Mr. E. G. Fishbourn	29	Lieut. of Albert	Febris remitt.		17		„
—	9	Mr. W. Johnston	29	First Engineer	„		23		„
—	„	George Veley	29	Marine	„		16		„
—	11	James Peters	25	Krooman	Contusio		16		„
—	12	Wm. Day	34	Marine	Febris remitt.		17		„
—	13	Jos. Hopkins	35	Sailmaker	„		17		„
—	16	Andrew Savage	25	Krooman	Catarrhus		22		„
—	„	Tho. Gibson	24	Krooman	„		22		„
—	19	John Waddington	30	Quarter Master	Febris remitt.		28		„
—	21	Dan. Bloomfield	24	Marine	Cynanche		25		„
—	„	Wm. Allford	22	Seaman	Febris remitt.		31	5. p.m.	Dead
—	23	Wm. Day	34	Marine	Hepatitis	November	14		Duty
—	25	James Carr	26	Stoker	Febris intermitt.	October	31		„
—	27	Rich. James	23	Carpenter's Crew	Ulcus	November	14		„
—	„	John Wilson	20	Captain's Cook	Febris remitt.	October	30		„
—	26	James Case	30	Seaman (coloured)	„ intermitt.	November	4		„
—	29	Wm. Funge	26	Seaman	„		4		„
—	„	Jas. Cotter	31	Sapper	„		2		„
—	„	Geo. Veley	29	Marine	„	October	30		„
—	„	Geo. Boyce	22	Seaman	„	November	7		„

TABLE I. Continued.

When put on Sick List.	Names.	Age.	Quality.	Disease or Wound.	When put off Sick List.	How disposed of.
November 2	Prince of Wales	23	Kroom. from Pluto	Phthisis (incip.)	November 24	Hospital at Ascension
— 4	Henry Collins	25	Blacksmith	Catarrhus	14	Duty
— 11	Mr. H. C. Toby	24	Acting Lieutenant	Febris remitt.	29	"
— 15	John Martin	24	Seaman	"	27	"
— 18	Jas. Carr	26	Stoker	"	29	"
— 19	Wm. Ward	32	Quarter Master	Delirium tremens	28	"
— 20	Absalom Delavante	50	Interpreter	Debilitas a febre	20	Invalided
— "	Tho. Roberts	29	Marine	"	20	"
— "	Tho. Bushell	16	Capt. Serv. (col.)	Phlegmon	24	Hospital
— 25	Geo. Veley	29	Marine	Febris intermitt.	December 5	Duty
— 27	Wm. Funge	26	Seaman	"	November 30	"
— 30	Tom Walker	18	Krooman	Bronchit. (chronica)	December 27	Hospital

Summary of Cases of Remittent and Intermittent Fever.

August	Febris remittens	2
September	Febris remittens	46
	Febris intermittens	3
October	Febris remittens	10
	Febris intermittens	6
November	Febris remittens	2
December	Febris intermittens	3
	Total	72

TABLE II.

LIST of the Persons belonging to H.M. Steam Vessel WILBERFORCE who died or were Invalided between the 12th of May 1841 and the 28th of January 1842.

Names.	Ages.	Rank.	Disease.	Date of commencement, place where, and in what Ship, or if on Shore.	Date of termination, place where, or in what Ship, or if on Shore.	How terminated.
J. Weston	44	Captain's Cook	Rheumatismus	July 23, at sea	At Sier. Le. Wilbe. Jul. 27	Invalided
H. Halbert	29	Stoker	Febris	18, do	At Sea do do 23	Died
D. Wright	24	African	Apoplexia.	22, do	do do 23	do
J. Kneebone	23	Seaman	Febris	Sept. 4, Wilberf. Niger.	Wilberforce Niger Sept. 11	do
W. Rabling	29	Sapper	do	6, do Confl.	do Confl. do 14, 5 p.m.	do
W. Lucas	26	Boats. mate	do	6, do do	Ascension Oct. 21	Invalided
H.C. Harston	29	Lieutenant	do	14, do do	do do 21	do
P. Fitzgerald	27	Stoker	do	16, do do	Wilberforce do 2	Died
C. Wakeham	45	Purser	do	17, do do	do mouth of Nun Sept 27	do
J. Osborne	25	Corpor. Marines	do	18, do do	Ascension 4 Jan. 1842	Invalided
H. Hillier	23	Carpent. Mate	do	19, do do	do 21 Oct. 1841	do
G. Cuthbertson	38	Serjt. Marine	do	26, do pas. down r.	Wilberforce 11 do do	Died
W. Allford	22	Seaman	do	Oct. 21, do do	do 31 do do	do
A. Delavant	50	Interpreter	Adynamia	Nov. 20, do Ascension	do 20 Nov. do	Invalided
T. Roberts	29	Pte. Marine	do	20, do do	do 20 do do	do.
T. Vogel	34	Botanist	Dysentery	Dec. 16, do Fern. Po	Fernando Po in Lodgings	Died
J. Morley	27	Carpenters mate	Drowned	June 10, do St. Vincent.	St. Vincents Wilberforce	do.

Seven deaths occurred from fever among the crew of the Wilberforce—one in proceeding to the Coast, prior to entering the River. Besides these there were two other deaths from fever, one the master of the Albert, the other the Assistant Surgeon of the Soudan, received on board at the Confluence for passage to the sea for benefit of change of air—making in all nine deaths on board the Wilberforce from fever.

Two deaths from other causes also occurred:—David Wright a liberated African died suddenly from apoplexy a few days after being entered on board; and John Morley, a carpenter's mate, was drowned while the Vessel was anchored off the Cape de Verdes. Dr. Vogel had a severe attack of fever on board the Wilberforce, from which he recovered; but he was seized with Dysentery two months after at Fernando Po, from which disease he died.

TABLE III.

LIST of the Persons belonging to H.M. Steam Vessel ALBERT who died or were Invalided between the 12*th day of May* 1841, *and the 28th day of January* 1842.

Names.	Age.	Rank.	Disease or Accident.	Date of commencement.	Place where, in what Ship, or if on Shore.	Date of Termination.	Place where, in what Ship, or if on Shore.	How terminated.
S. Johnson	28		Conc. of Brain	July 3, 1841	Passage to Monrovia	July 3, 1841	H. M. St. V. Albert	Died
T. Kemp	23	Pt. Marine	Uncertain	Uncertain	do Albert	2, do	Cape Coast do	Invalided
W. Bach	34	Instrum. Maker	Fever	Aug. 9, 1841	Mouth of Nun do	Aug. 15, do	Mouth of Nun do	Died
J. Pegler	32	Stoker	Remitt. Fever	Sept. 4, do	Iddah do	Sept. 7, do	Iddah do	do
W. Underwood	22	2nd. G. R. Stew.	do	ditto	ditto		Ascension Hospital	Invalided
J. Robertson	30	Stoker	do	5, do	ditto	Sept. 17, 6 p. m.	Confluence Albert	Died
J. Burgess	24	Seaman	do	ditto	ditto	16, 6½ do	do do	do
Johnson	40	Interpreter	Drowned	ditto	ditto	5, do	Iddah do	do
W. McMillan	32	Quarter Master	Remitt. Fever	6, do	ditto		Pass. to Ascension Dol.	do
L. Woolfe	19	Seam. Schoolm.	do	ditto	ditto		do Fernan. Po Soud.	do
G. Powell	23	Cooper	do	7, do	ditto	Sept. 11, do	Addah Kuddu Albert	do
W. Merriman	42	Gunner	do	8, do	ditto	Nov. 22, do	Fernando Po Hospital	Invalided
F. Nightingale	26	Assist. Surgeon	do	ditto	do Amelia Tender	Sept. 17, do	Confluence Albert	Died
W. Moffat	27	Sapper	do	9, do	Apokia do		Pass. to Ascension Dol.	do
M. Ali	26	Cook	do	ditto	do Albert		Ascension Hospital	Invalided
J. May	35	Boatswain mate	do	13, do	Confluence do		do do	do
R. Milward	46	Pursers Steward	do	14, do	ditto	Oct. 22, 1841	Fernando Po do	Died
E. Jones	36	Quarter Master	do	17, do	ditto		Pass. to Ascension Dol.	do
J. Waller	26	Corpor. Marines	do	18, do	ditto		do do do	do
T. Ward	28	G. R. Steward	do	ditto	ditto		Ascension Hospital	Invalided
J. Thomas	24	Stoker	do	ditto	ditto		do do	do
G.B. Harvey	32	Master	do	ditto	ditto		H.M. St. V. Wilberf.	Died
D.H. Stenhouse	26	Acting Lieut.	do	19, do	ditto	Oct. 28, 1841	Fernando Po Hospit.	do
J. Fuge	28	Seaman	do	20, do	do Amelia	Sept. 28, do	Egga Albert	do
W. H. Wilmet	19	Clerk	do	23, do	Goree Market Albert	Nov. 5, do	Fernando Po Hospital	do

TABLE III. *Continued.*

J. Brown	26	3rd. Engineer	Remitt. fever.	Sept. 23, 1841	Goree Market Albert	Nov. 22, do	Fernando Po Hospital	Invalided
J. McClintock	23	Stoker	do	24, do	ditto	20, do	do do	Died in a Scuf.
G. Syme	40	Quarter Master	do	25, do	Nufi Vill. Rilami do	Oct. 2, do	Egga Albert	Died
G. Cole	23	Marine	do	ditto	ditto	16, do	Nun to Fer. Po do	do
A. Lodge	36	2nd. Engineer	do	28, do	Egga do do	8, do	Mount Victoria do	Delir. jumped overb. drowned
J. Horton	29	Seaman	do	Oct. 7, do	Passage from Egga do	Nov. 22, do	Fernando Po Hospital	Invalided
W. C. Willie	24	Mate	do	4, do	Egga do	Oct. 18, do	do do	Died
J. Woodhouse	26	Assist. Surgeon	do		Soudan	30, do	do Gov. House	do
M. Kingston	42	Marine	Ch. Gaitni Dis.	Nov. 2, do.	Fernando Po Albert	Nov. 6, do	do Hospital	do
T. Davis	26	Krooman	Consumption		H. M. St. Ves. Pluto	Jan. 17, 1842	Pass. to Ascension Alb.	do

23 Deaths from fever—one of which took place in the Wilberforce; one death from accident and one from drowning. Several cases were left in Hospital at Ascension in a most precarious state.

TABLE IV.

LIST of the Persons belonging to H.M. Steam Vessel SOUDAN who died or were Invalided between the 12th day of May 1841 and the 28th day of January 1842.

Names.	Age.	Rank.	Disease.	Date of commencement, place where, in what Ship, or if on Shore.	Date of termination, place where, in what Ship, or if on Shore	How terminated.
B. Allen		Commander	Febris	Albert.	Fernando Po.	Died
J. Belam	28	Master	do	Sept. 14, Soudan	Oct. 21, Ascension	Invalided
W. B. Marshall	40	Surgeon	do	6, do	Sept. 21 Soudan	Died
N. Waters	30	Clerk in Charge	do	16, do	do 22 do	do
H. Coleman		Assist. Surgeon	do		Wilberforce	do
W. Johnston	25	2nd. Engineer	do	Soudan	Oct. 21 Ascension	Invalided
W. Kingdon		Seam. Schoolm.	do		Albert	Died
W. Edwards	25	Pursers Steward	(Drowned)	May 20, at Sea	Betw.C.Verd.& StVincnts.	do
C. Bigley	25	Stoker	Febris	Sept. 23, Soudan	Soudan Ferna. Po	do
J. Perram	40	do.	do	20, do	Oct. 21 Ascension	Invalided
W. Strain	24	Gent. Steward	do	14, do	do 21 do	do
J. Kerns	24	Stoker	do	20, do	Dolphin	Died
J. Thomas	26	Carpenters mate	do	14, do	Sept. 21 Soudan	do
C. Trower	26	Stoker	do	14, do	Oct. 21 Ascension	Invalided
J. Young	33	Quarter Master	do	16, do	Dolphin	Died
J. Whittaker	35	do.	do	20, do	do	do
C. Lewing		Steward	do	2, do	Soudan	do
J. Davis	21	Captain's Coxs.	do	do	Oct. 21 Ascension	Invalided
H. Dennis	32	Boatsw. Mate	do	16, do	do 21 do	do
W. M'Lauchlin		Sail Maker	Hydrops, Febris	do	Fernando Po	do
J. Hill	26	G. R. Steward	do	18, do	Dolphin	Died
H. Isaacs	35	Corp. Marines	do	19, do	Jan. 4 Ascension	Invalided
B. Pitham	36	Pt. Marine Art.	do	3, do	Oct. 21 do	do
J. Hibbert	22	Pt. Marine	do	21, do	do 21 do	do
P. Tyack	26	do.	do	13, do	do 21 do	do
J. Strayman	22	AB	do	15, do	do 21 do	do

The Soudan's complement on leaving England consisted of 32 white men; of which number 12 died of Fever, one was drowned, & 15 were Invalided,—leaving four only effective, viz. Captan Ellis, Mr. Webb, Mr. Sidney, and Mr. Gustafson, 1st Engineer.

TABLE V.

Thermometer & Hygrometer, July, 1841. *At Sierra Leone, Monrovia, Grand Bassa, Cape Palmas, & Cape Coast Castle.*

Note.—In these Tables the Dew point is calculated by taking twice the difference of the readings between the Wet and the Dry bulbs from the reading of the Dry bulb. The result is not quite correct, but it is within a small fraction of a degree of being so.

Date.	3 A.M.			9 A.M.			3 P.M.			9 P.M.			Weather.
	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
1	77	75	73	83	76	69	82	77	72	81	76	71	Anchor at Sierra Leone, very fine, evening heavy rain.
2	80	76	72	81	76	71	83	76	69	82	76	70	Very fine, hot 12 a.m., left Sierra Leone.
3	81	77	73	83	78	73	82	76	70	80	76	72	Very fine.
4	81	76	71	81	77	73	80	76	72	80	76	72	Fine.
5	78.5	77	75½	81	78	75	80	75	70	80	77	74	Morning cloudy, 9 a.m. tornado and heavy rain, anchored off Monrovia.
6				77½	75	72½	77	75	73	79	76	73	Morning heavy rain till 2 p.m., 6 p.m. left Monravia.
7	78	76	74	77	75	73	82	75	68	77	75	73	Rain all night and morning till 11 a.m. afternoon showers.
8	79	75	71	81	75	69	80	75	70	80	75	70	6 a.m. heavy shower, day finer, evening showers.
9	81	76	71	78	74	70	80	76½	75½	78	76	74	7 a.m. rain, 11 a.m. anchored at Great Bassa, 6 a.m. heavy rain.
10	78	76	74	76	74	72	78	75	72	79	75	71	Rain all day, very heavy.
11	79	76	73	78	75	72	78	74	70	80	75	70	Morning rain, afternoon dry.
12	79	77	75	77	74	71	79	75	71	80	75	70	Showery, heavy rain, afternoon rather dry.
13	79	75	71	77	74	71	77	75	73	79	74	69	Morning heavy rain, noon cloudy, afternoon showers.
14	76	73	70	78	75	72	81	76	71	81	75	69	Showers, cloudy, 5 p.m. left Grand Bassa.
15	79	74	69	76	74	72	81	75	69	80	75	70	Much rain, cloudy.
16	79	75	71	82	77	72	83	76	69	80	76	72	Fine, cloudy 9 a.m. anchored off Cape Palmas.
17	82	76	70	81	76	71	82	76	70	80	75	70	Very fine, cool.
18	79	74	69	81	74	69	82	75	68	80	75	70	Very fine, cool, 2 P.M. left Cape Palmas.
19	79	73	67	80	74	68	81	75	69	79	76	73	Morning fine, 10 a.m. heavy shower.
20	78	73	68	79	75	71	82	75	68	80	75	70	Very fine, calm.
21	77	73	69	78½	74	69½	81	76	71	80	75	70	Very fine, calm.
22	79½	75	75	79	75	71	82	77	72	80	76	72	Very fine, light breeze.
23	77	73	69	79	75	71	81	76	71	80	76	72	Very fine, calm, off Cape Coast Castle.
24	77	73	69	79	75	71	80	77	74	79	78	77	Very fine, 6 p.m. anchored at Cape Coast Castle.
25	79	73	67	79	75	71	80	76	72	80	77	74	Very fine.
26	79	76	73	79	76	73	80	77	74	80	77	74	Very fine.
27	80	77	74	81	78	75	78	76	74	78	75	72	Very fine.
28	80	76	72	79	77	75	77	75	73	78	74	70	Very fine, 5 p.m. heavy rain,
29	79	76	73	79	76	73	78	75	72	77	75	73	Fine, cloudy.
30	78	76	74	79	76	73	79	75	71	78	75	72	Cloudy, showers.
31	78	75	72	77	74	71	78	76	74	77	76	75	Fine, cloudy, 9 p.m. steamed from Cape Coast Castle.

TABLE VI.

Thermometer and Hygrometer, August, 1841. *At Accra, off the Nun River, up the Niger at Eboe.*

Date	3 A.M.			9 A.M.			3 P.M.			9 P.M.			Weather.
	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
1	79	75	71	77	74	71	80	76	72	78	75	72	Fine, cloudy, 2 p.m. anchored at Accra, 8 a.m. heavy rain.
2	77	75	73	78	75	72	79	75	71	78	75	72	Morning cloudy, 5 p.m. heavy rain
3	77	74	71	77	73	69	80	74	68	76	74	72	Cloudy.
4	77	75	73	75	72	69	79	73	67	74	71	68	Very fine, cool, 10 p.m. left Accra.
5	76	73	70	76	74	72	78	75	72	78	75	72	Cloudy, fine.
6	76	73	70	78	75	72	80	75	74	79	74	69	Very fine, afternoon hot.
7	78	75	72	80	75	70	80	75	70	79	75	71	Very fine, evening cloudy, misty.
8	80	76	72	79	75	71	78	75	72	77	75	73	Cloudy, 11 a.m. thunder storm with h. rain, aftern. fine, even. squal. with h. rain
9	77	75	73	76	74	72	75	73	71	77	74	71	Incessant rain all night and day, 9 a.m. anchored off the "Nun."
10	77	74	71	77	73	69	76	73	70	78	73	68	Cloudy, light breeze.
11	77	74	71	79	74	69	80	74	68	79	75	71	Very fine, dry.
12	77	74	71	82	76	70	82	76	70	79	74	69	Cloudy, light breeze.
13	77	74	71	81	75	69	78	74	70	80	79	77	Cloudy.
14	77	74	71	79	75	71	79	75	71	79	75	71	Cloudy, 3 a.m. heavy rain.
15	77	74½	72	79	76	73	79	77	75	77	75	73	Cloudy, calm, very hot, noon, steamed over the bar.
16	77	75	73	77	74	71	79	75	71	77	74	71	Rain during night till 11 a.m. afternoon dry.
17	78	75½	73	77	74	71	79	74	69	78	74	70	Heavy showers during night till 11 a.m. afternoon dry, breeze.
18	77	73½	70	80	75	70	81	75	69	79	75	71	Very fine, cloudy.
19	79	74	69	79	74	69	82	76	70	78	74	70	Very fine.
20	79	75	71	81	76	71	84	76	80	80	75	70	Cloudy, 6 a.m. rain, steamed up the river, noon fine, afternoon cloudy.
21	78½	74	69½	82½	76	69½	83	76	69	79	76½	72	Morning very fine, noon cloudy, evening shower.
22	80	76	72	81	77	73	80	75	70	79	76	73	Cloudy, fine.
23	78	75	72	80	76	72	75	73	71	75	73½	72	Morning cloudy, fine; 10 a.m. shower; from 1 p.m. constant rain till night.
24	80	77	74	79	76	73	81	76	71	77	75	73	Cloudy, morning rainy, afternoon very fine, evening rainy.
25	80	77½	73	79	76	73	77½	75	72½	77	75	73	Cloudy, 11 a.m. to 2 p.m. rain, afternoon cloudy, even. rain, anch. off "Eboe."
26	80	76½	73	79	75	73	76	73½	71	76	74	72	Cloudy, fine, 11 a.m. heavy rain, afternoon cloudy.
27	79	76	73	76	74	72	80	75	70	75	72	69	Cloudy, fine, with passing showers, afternoon and evening cloudy.
28	78	74	70	77	74½	72	79	75	71	77½	75	72½	Misty, fine, afternoon very fine, 4 p.m. left Eboe creek, evening fine.
29	78½	75	72	78	74	70	77	74	71	75	73	71	Fine, 1 p.m. heavy squall, both wind and rain, afternoon rain.
30	78	75	71½	78	75	72	83½	77	71½	77½	75	72½	4 a.m. rain, day very fine and hot, 5 p.m. heavy rain till 10 p.m.
31	78	75	72	80	75	70	83	76	69	78	76	74	Morning fine, afternoon very hot, splendid sunset.

TABLE VII.

Thermometer and Hygrometer, Sept. 1841. *Up the Niger at Iddah, Adda Kuddu, the Confluence of Niger and Tchadda, and from thence down to the Sea.*

Date	3 A.M.			9 A.M.			3 P.M.			9 P.M.			Weather.
	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
1	77	74	71	78	75	72	76	73	70	77	75	73	Morning cloudy, 10 a.m. heavy rain, 3 p.m. rain with thunder, afterwards fine.
2	74	74½	69	78	75	72	82	78	70	77	74½	72	Morning cloudy, day very fine and hot, 7 p.m. anchored off " Attah."
3	79	76	73	77	74	71	76	74	70	76	73	70	Morn. cloudy, 8 a m. moved to opposite side of river, 3 p.m. h. rain, ev. cloud.
4	77	74	71	78	74	70	82	75½	62½	80	76	72	Morn. misty, 1 p.m. h. rain, day very fine, even. moved from swampy banks.
5	78	74	70	79	74½	70	83	76	69	83	78	73	Very fine, cool in morning, afternoon intensely hot.
6	79	74	69	80	76	72	81	75	69	80	76	72	Morning fine, 11 a.m. thunder storm ; afternoon cloudy.
7	78	74	70	80	75	70	84	76	68	75	73	71	Fine, hot all day, 9 a.m. heavy rain which continued all night.
8	78	75	72	78	75	72	84	77	70	77	74	71	Cloudy, day fine, 5 p.m. heavy squall, evening fine, 5 p.m. left " Attah."
9	79	75	71	79	75	71	76	73	70	76	73	70	Morning foggy, day fine, 3 p.m. squall with a little rain.
10	78	74	70	79	75	71	84	77	70	82½	79	75½	Fine, 7 p.m. anchored 2 miles below Adda Kuddu.
11	78	74	70	79	75	71	86	77	68	81½	77	72½	Morning cloudy, 7 a.m. at Adda Kuddu, afternoon steamed to Mount Stirling.
12	79	77	75	81	75	69	87	77	67	82	76	70	Morning cloudy, day fine.
13				79	74	69	85	77	69	79	74	69	Very fine and very hot, at Mount Stirling.
14				82	75	65	86	77	68	82	77	72	Fine, morning cool, noon very hot.
15				79	74½	69	86	78	78	80	75	70	Cloudy, fine.
16	77½	75	72½	82	76	70				78	74	70	Cloudy, 2 p.m. heavy rain till evening.
17	77	74	71	82	78	74	83	78	73	78	75	72	Very fine, hot passing showers and squalls, evening rain.
18	77	74	71	84	77	70	80	77	71				Very fine, intensely hot.
19							85	77	69	81	76	71	Very fine.
20							83	77	71	80	77	74	Morning cloudy with rain, afternoon fine, 5 p.m. showers.
21	80	77	74	82	76	70	90	80	70	77	75	73	Fine, 6 a.m. steam. down river, 3 p.m. very hot, even. lightn. with h. rn. till 4 a.m.
22				81	77	73	87	78	69	80	76	72	Fine, cloudy, light showers, 7 a.m. passed " Iddah."
23				81	77	73	87	79	71	79	76	73	Very fine, 11 a.m. at Eboe, 6 p.m. left Eboe.
24				81	76	71				77	75	73	Cloudy with showers and rain till afternoon.
25				77	75	73	83	75	73	77	75	73	Morn. cloudy, constant rain till 3 p.m. even. fine, 6 p.m. anch. inside the bar.
26				79	76	73	77			77	74½	72	Rain during night, morning fine till 10 a.m. then rain till 3 p.m. evening dry.
27				79	76	73		75	73	77	75	73	Morning cloudy, noon rain till 5 p.m. evening dry.
28				81	76	71	77	76	69	79	76	73	Very fine, afternoon hot.
29				80	76	72	83	78	73	80	77	74	Morning fine, 11 a.m. rain, afternoon fine, 5 p.m. steamed over the bar.
30				81	77	73	83	76	72	80	76	72	Very fine, breeze.

TABLE VIII.

Thermometer and Hygrometer, *Oct.* 1841. *At the Islands of Fernando Po, Princes, St. Thomas, and Anno Bon.*

Date	9 A.M.			3 P.M.			9 P.M.			Weather.
	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
1	78	75½	73	82	77	72	78	75	72	4 a.m. heavy rain till near noon, 9 a.m. anchored at Fernando Po.
2	80	76	72	84	78	72	77	74	71	Very fine.
3	83	77	71	84	77	70	78	74	70	Very fine, evening lightning.
4	77	74	71	84	77	70	76	73	70	4 a.m. heavy rain till near noon, afternoon fine.
5	78	74	70	83	78	73	79	75	71	Veryfine, breeze.
6	76	74	72	79	77	75	77	74	71	Cloudy, 7 a.m. heavy rain till 3 p.m.
7	83	76	69	84	77	70	76	74	72	Very fine and hot.
8	79	76	73	80	75	70	76	74	72	Morning cloudy, 7 a.m. rain till noon, afternoon fine with occasional showers.
9	80	76	72	82	77	72	80	77	74	Morning fine, 11 a.m. heavy rain till 2 p.m., 8 p.m left Fernando Po.
10	81	77	73	82	77	72	81	76	71	Cloudy, fine.
11	82	77	72	83	77	71				Morning fine, 11 a.m. heavy rain, aftern. fine, evening rain, 5 p.m. anch. at Prince Isle.
12	81	76	71	79	75	71	77	73	69	Morning cloudy, 3 p.m. heavy rain.
13	82	76	70	79	76	73	76	74	72	Cloudy, rainy; evening rain.
14	80	76	72	79	76	73	75	73	71	Morning cloudy; 9 a.m. rain till 1 p.m., evening constant rain, 6 p.m. left Prince Isle.
15	81	76	71	80	74	68	76	73	70	Cloudy, fine; 8 p.m. anchored at St. Thomas's.
16	82	76	70	83	75	67	77	74	71	Fine; noon very hot, evening fine.
17	81	76	71				77	74	71	Fine; 3 p.m. heavy rain, evening fine.
18	82	76	70	77	75	73	76½	74	71½	Cloudy; 11 a.m. heavy rain, and throughout the day.
19	80	76	72	80	75	70	78	74	70	Day fine, cloudy.
20	78	75	72	76	74	72	77	75	73	Rain all night till noon; afternoon and evening heavy rain.
21	76	74	74	77	75	73				Morning heavy rain till noon; afternoon rain.
22	80	75	70	83	77	71	79	76	73	Fine; afternoon very fine.
23	82	77	72	80	75½	71	79	76	73	Very fine; slight showers, 3 p.m. steamed round Island and anchored off Rallas.
24	77	75	73	79	74	69	78	74	70	Rain during night; day fine, 5 p.m. heavy shower.
25	79	76	73				76	74	72	Morning fine; noon heavy rain, and continued throughout.
26	77½	75	72½	82½	75	68	80	75	70	Daylight left St. Thomas's for Anno Bon; day fine.
27	79	74	69	77	75	72½	77	74	71	Morning fine; heavy rain from 1 p.m. to 4 p.m., 4 p.m. anchored at Anno Bon.
28	80	75	70	80	76	72	78	74	70	Very fine all day At Anno Bon.
29	81	75	69	83	76	69	78	73	68	Very fine, hot
30	80	74	68	82	74	66	77	73	69	Very fine, cloudy
31	78	74	70	82	75	68	78½	74	69½	Very fine all day

TABLE IX.

Thermometer and Hygrometer, Nov. 1841. At Anno Bon and Ascension.

Date.	9 A.M.			3 P.M.			9 P.M.			Weather.
	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
1	81	75	69	81	74	67	77	74½	72	Very fine, cloudy, 8 p.m. shower.
2	80	75	70	82	75	68	78	74	70	Very fine, breeze.
3	80	75	70	83	75	67	78	74	70	Morning cloudy, day very fine.
4	81	75	69	83	75	67	79	74	69	Morning cloudy, noon very hot.
5	81	75	69	82	75	68	80	75	70	Very fine, 3 p.m. left Anno Bon for Ascension.
6	81	75	69	80	74	78	77	73	69	Very fine, breeze.
7	78	73	68	79	73	67	76½	71	65½	Very fine, breeze.
8	76	70	64	75	70	65	75	70	65	Cloudy, cold.
9	75	68	61	74	69	64	72½	67	61½	Cloudy, fine; afternoon and evening very fine.
10	73½	70	66½	73½	68	62½	72	66	60	Morning cloudy, noon very fine.
11	73	67	61	74	67	60	72	67	62	Fine, breeze.
12	73	70	67	74	69	64	72	68	64	Fine, misty showers during morning, afternoon cloudy.
13	74	68	62	75	68	61	73	67	61	Very fine.
14	75	68	61	78	78	62	73	68	63	Very fine.
15	74	67	60	78	70	62	75	70	65	Very fine.
16	77	71	65	77	72	67	76	71	66	Very fine.
17	79	72	65	78	70	62	75	70	65	Cloudy, fine, 8 a.m. anchored at Ascension.
18	78	71	64	79	72	65	76	70	64	Fine.
19	79	71	63	79	71	63	75	70	65	Fine.
20	79	71	63	80	71	62	76	70	64	Fine.
21	76	69	62	80	70	60	75	68	61	8 a.m. shower, day fine.
22	79	67	55	79	69	59	75	69	63	Very fine.
23	77	70	63	79	70	61	75	68	61	Fine.
24	78	70	62	78	69	60	76	69	62	Very fine.
25	79	70	61	80	70	60	75	67	59	Fine.
26	78	69	60	80	69	58	75	69	63	Very fine, morning cloudy.
27	79	72	65	80	70	60	76	70	64	Very fine.
28	77	72	67	79	72	65	76	70	64	Very fine, breeze.
29	78	71	64	77	71	65	75	70	65	Cloudy, slight shower.
30	78	69	60	80	70	60	75	68	61	Cloudy, cool breeze, fine.

TABLE X.

Thermometer and Hygrometer, Dec. 1841. *At Ascension.*

Date.	9 A.M.			3 P.M.			9 P.M.			Weather.
	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
1	77	69	61	78	70	62	75	69	63	Cloudy, misty.
2	78	71	64	78	71	62	75	70	63	Very fine, breeze.
3	77	69	61	78	69	60	75	69	63	Very fine.
4	78	69	60	79	70	61	75	69	63	Very fine, breeze.
5	75	71	67	78	71	64	75	69	63	Morning misty, day fine.
6	77	72	67	78	70	64	76	70	64	Cloudy, fine.
7	78	69	60	79	70	61	75½	69½	63½	Morning cloudy, noon very hot.
8	78	70	62	78	70	64	75	70	65	Stiff breeze, fine, slight misty showers.
9	78	70	62	79	70	61	75	69	63	Very fine.
10	78	70	62	80	69	58	75½	70	64½	Very fine, hot.
11	77	71	65	79	71	63	75	70	65	Very fine, stiff breeze.
12	78	71	64	80	70	60	75	70	65	Very fine, hot.
13	77	70	63	79	71	63	75	69	63	Morning cloudy.
14										Very fine.
15										do. do.
16				81	70	63	76	70	64	do. do.
17	78	70	62	80	70	60	76	69	62	do. do.
18	78	70	62	80	70	60	76	68	60	do. do.
19	79	70	61	80	70	60	75	69	63	do. do.
20	80	70	60	80	70	60	76	70	64	Very fine, breeze.
21	79	70	61	80	70	60	75	69½	64	Very fine, breeze.
22	79	68	57	80	69	58	75½	69	62½	Very fine.
23	78	70	62	80	71	62	76	69	62	Fine, breeze.
24	78	70	62	80	71	62	76	70	64	Very fine.
25	78	70	62	80	69	58	75	69	63	do. do.
26	79	69	59	79	70	61	75	69	63	Very fine, breeze.
27	79	69	59	81	71	61	76	70	64	Very fine.
28	80	72	64	79	71	63	75	69	63	do. do.
29	79	71	63	80	71	62	76	70	64	Very fine.
30	79	71	63	80	71	62	74	70	66	Cloudy, fine.

TABLE XI.

H.M. STEAM VESSEL WILBERFORCE.

TABLE showing the Temperature and Hygrometrical condition of the Engine Room and of the atmosphere on deck, the vessel being under steam from the 20th of August, while in the river Niger.

Month Day.	Week Day.	On Deck.						Engine Room.						
		9 A.M			3 P.M.			9 A.M.			3 P.M.			
		Dry.	Wet.	Dew point	Dry.	Wet	Dew point	Dry.	Wet	Dew point	Dry.	Wet	Dew point	
Aug.														
20	F.	81	76	71	84	76	68	93	84	75	100	85	70	Steamed up River at day-light.
21	S.	82½	76	75½	83	76	69	100	86	72	97	85	67	Steaming.
22	Sun.	81	77	73	80	75	70	96	85	74	100	87	74	do.
23	M.	80	76	72	75	73	71	96	85	74	101	84	67	do.
24	Tu.	79	76	73	81	76	71	97	85	73	101	88	79	do.
25	W.	79	76	73	77½	75	72½	100	85	70	104	84	64	do.
26	Th.	79	75	71	76	73½	71	96	86	76	98	84	70	do.
27	F.	76	74	72	80	75	70	88	80	72	88	81	74	At anchor.
28	S.	77	74½	72	79	75	71	85	80	75	92	83	74	At anchor till evening.
29	Sun.	78	74	70	77	74	71	91	82	73	88	81	74	Steaming.
30	M.	78	75	72	83½	77	70½	100	85	70	106	87	68	do.
31	Tu.	80	75	70	83	76	69	103	84	75	106	85	64	do.
Sept.														
1	W.	78	75	72	76	73	70	99	84	69	102	85	68	do.
2	Th.	78	75	72	82	78	74	97	83	69	107	87	67	do.
3	F.	77	74	71	76	74	72	87	83	79	95	85	75	Steam up from 8 to 12 A.M.

During this period the vessel was under steam by day only, being anchored at night. Otherwise, probably the drying powers of the air of the Engine Room would have been still more increased.

TABLE XII.

Thermometer and Hygrometer for January, 1842. *At Ascension.*

Date.		9 A.M.			3 P.M.			9 P.M.			Remarks.
W.	M	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
S.	1	78	70	62	80	71	62	76	70	64	Very fine, breeze.
Sun.	2	79	69	61	80	69	68	76	70	64	Very fine.
M.	3	79	69	61	79	68	67	77	70	63	ditto.
Tu.	4	80	72	64	82	73	64	77	70	63	ditto.
W.	5	79	71	63	82	74	66	76	69	62	Fine, breeze.
Th.	6	79	72	65	82	74	66	77	70	63	Very fine.
F.	7	79	71	63	81	72	63	77	71	65	ditto.
S.	8	79	71	63	80	71	62	76	70	65	Very fine, evening rain
Sun	9	79	71	63	80	72	64	75	71	67	ditto.
M.	10	80	72½	65	80	72	64	77	71	65	Very fine.
Tu.	11	79	72	65	80	72	64	76	71	66	Very fine, breeze.
W.	12	79	71	63	81	72	63	75	71	67	Cloudy, day fine, evening rain.
Th.	13	78	71	64	79	71	63	75	70	65	Very fine, calm, showers.
F.	14	79	71	63	80	71	62	75	69½	64	Fine, cloudy.
S.	15	76	72	68	78	71	64	75	70	65	Fine.
Sun	16	80	73	66	80	72	64	75	70	65	Very fine.
M.	17	77½	72	66½	80	71	62	75	70	65	Fine, breeze.
Tu.	18	80	72	64	81	72	63	75	69	63	Very fine.
W.	19	79	72	65	78	70	62	76	69	62	ditto.
Th.	20	78	69	60	80	72	64	76	70	64	ditto.
F.	21	80	70	60	82	72	62	76	69	62	ditto.
S.	22	79	70	61	80	71	62	77	70	63	ditto.
Sun	23	78	72½	67	80	72	64	75	72	69	Cloudy, with showers.
M.	24	79	73	67	81	72	63	76	71	66	Very fine.
Tu.	25	79	71	63	80	71	62	77	71	65	ditto.
W.	26	80	72	64	82	72	60	77	72	67	ditto.
Th.	27	78½	71	63½	81	72	63	77	70	63	ditto.
F.	28	77½	69½	61½	80	71½	63	77	71	65	Fine.
S.	29	80	72	64	82	72	62	77	71	65	Very fine, hot.
Sun	30	80	73	66	87	72	63	77	71½	66	Very fine.
M.	31	80	71	62	81	71	61	77	70	63	Very fine.

TABLE XIII.

Thermometer and Hygrometer, February, 1842. *At Ascension.*

Date.		9 A.M.			3 P.M.			9 P.M.			Remarks.
W.	M	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
Tu.	1	78	69	60	82	72	62	77	70	63	Very fine.
W.	2	79½	70	61	82	72	62	78	71	64	Very fine, hot.
Th.	3	79	71	63	80	72	64	77	72	67	Fine, shower at noon.
F.	4	78	72	66	82	73	64	77½	71½	65½	Very fine.
S.	5	80	71	66	82	73	64	78	71	64	Very fine, breeze.
Sun	6	77½	73	68½	82	73	64	78	72	66	Very fine, hot.
M.	7	80	72½	65	82	73½	65	77½	72½	67½	Very fine, hot.
Tu.	8	80	73	66	77	72	67	80	73	66	Very fine.
W.	9	80	73	66	82	73	64	77	72	67	Very fine.
Th.	10	79	72	65	82	72	62	77	71½	66	ditto.
F.	11	79	72	65	83	72½	62	77	71½	66	ditto.
S.	12	80	71½	63	83	73	63	78	74	70	Cloudy, fine.
Sun	13	82	75	68	84	75	66	78	74	70	Very fine, hot.
M.	14	81	74	67	83	75	67	78	73	68	Fine.
Tu.	15	81	74	67	84	74	64	74	74	54	ditto.
W.	16	80	72	64	80	72	64	76	72	68	Fine, evening rain, very heavy.
Th.	17	81	74	67	85	76	67	78	73	68	Morning cloudy, noon rain, afternoon hot.
F.	18	79	74	69	79	75	71	78	74	70	Morning fine, 9 a.m. heavy rain.
S.	19	79	75	71	83	76	69	79	72	65	Fine.
Sun	20	81	75	69	84	75	66	78	73½	69	Very fine.
M.	21	78	74	70	80	73	66	78	73	68	Constant rain during the morning, ceased at 2 p.m.
Tu.	22	80	75	70	83	75	67	78	74	70	Fine.
W.	23	81	76	71	83	75	67	79	74	69	Fine, very hot.
Th.	24	80	75	70	82½	74½	66½	79	74	69	Fine, cool breeze.
F.	25	82	74	66	83	73	63	79	73	67	Very fine, hot.
S.	26	82	72	62	84	74	64	78	72	66	ditto.
Sun	27	82½	74	65½	83	73	63	79	73	67	Very fine.
M.	28	82	74	66	83	74	65	78	72	66	ditto.

TABLE XIV.

Thermometer and Hygrometer, March 1841. *At Ascension, Cape Coast Castle, Accra, &c.*

Date.		9 A.M.			3 P.M.			9 P.M.			Remarks.
W.	M	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
Tu.	1	81	73	65	84	75	66	78	72	66	Very fine, breeze.
W.	2										
Th.	3										
F.	4										
S.	5				83	73	63½	79	73	67	Very fine.
Sun	6	82	73	64	83	74	65	78	72	66	do. do.
M.	7	82	73	64	85	74	63	79	73½	68	Very fine, hot.
Tu.	8	84	76	68	84	77	70	79	76	73	Very fine.
W.	9	83	76	69	83	75	67	78	74	70	Very fine, hot, afternoon shower.
Th.	10	83	76	69	85	76	67	79	76	73	Very fine, 7 p.m. left Ascension.
F.	11	82	77	72	83	77	71	80	76	72	At sea, very fine, breeze.
S.	12	83	77	71	83	77	71	81	76	71	do. do.
Sun	13	83	78	73	83	78	73	82	77	72	do. do.
M.	14	82	77	72	82	77½	73	81	76½	72	At sea, very fine, breeze, afternoon misty.
Tu.	15	82½	77	71	79	74	69	81	77½	74	At sea, cloudy, showers.
W.	16	83	77	71½	81	78	74½	82	77	72	At sea, fine slight showers.
Th.	17	84	78	72	85½	78	71	78	74	70	Very fine all day, evening heavy rain.
F.	18	82	78	74	84	78	72	81	77	73	Rain all night, day fine, with heavy showers.
S.	19	85	79	73	84	79	74	82	78	74	Very fine, hot.
Sun	20	84	80	76	84	79	74	82½	79	75½	Very fine, very hot, **8** p.m. anchored off Cape Coast [Castle.
M.	21	83	79	75	85	79	73	82	78	74	Very fine, hot.
Tu.	22	83	78	73	86	80	74	82½	78	73½	do. do.
W.	23	84	79	74	87	80	73	83	78	73	Very fine.
Th.	24	84	79	74	87	80	73	81	78	75	Morning rain, day fine, cool.
F.	25	80	77	76	85	80	75	81	77	73	Cloudy, with swell, **12** p.m. tornado.
S.	26	76	71	66	87	78	69	82	77	72	Cloudy, noon very fine.
Sun	27	79	76	73	83½	78	72½	80	76	72	Cloudy all day.
M.	28	84	80	76	87	80	73	79	77	75	Very fine.
Tu.	29	84	80	76	88	81	74	82	78	74	Very fine, **4** p.m. left Cape Coast Castle.
W.	30	84	78	72	86	80	74	82	78½	75	**7** a.m. at Accra, fine, **8** p.m. left Accra.

TABLE XV.

Thermometer and Hygrometer, April 1842. *Between Fernando Po, Bimbia, and the Amboines.*

Date.		9 A.M.			3 P.M.			9 P.M.			Remarks.
W.	M	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
F.	1	84	79	74	85	78½	72	83	78	73	2 am. tornado, day very fine, hot, **5** p.m. left Popo, **8** a.m. fine weather.
S.	2	83	76	69	84	77	70	83	78	73	**1** a.m. tornado, day very fine.
Su.	3	84	79	74	78	75	72	80	74	68	**2** a.m. tornado, morn. fine, **10** a.m. tornado, afterwards heavy showers.
M.	4	81	76	71	80	76	72	80	77	74	Cloudy, with heavy swell, afternoon calm.
W.	5	81	77	73	84	78	72	81½	77	72½	Fine, calm.
Tu.	6	84	79½	75	84	79	74	82	78	74	do. nearly calm.
Th.	7	83	78	73	87	80	73	77	75	73	Very fine, **8** a.m. anchored at Fernando Po, **12** a.m. at Clarence Cove.
F.	8	85	79	73	87	80	73	82	78	74	Very fine.
S.	9	78	76	74	85	78	71	80	76	72	7 a.m. rain, day fine.
Su.	10	80	77	74	80	77	74	76	74	72	Cloudy, noon showers, very heavy.
M.	11	84	77	70	84	79	74	77	75	73	Very fine, very hot.
Tu.	12	82	77	72	86	80	74	77½	75	72½	Very fine, morning cloudy.
W.	13	83	78	73	85	80	75	79	76	73	Very fine.
Th.	14	84	78½	72	82	78	74	79	77	75	Cloudy, fine, evening lightning.
F.	15	83	78	73	84	80	76	78	76	74	Very fine.
S.	16	84	78	72	85	80	75	79½	77	74½	Very fine, hot.
Su.	17	87	81	75	87	80	74	83	80	77	do. do.
M.	18	77	75	73	87	81	75	79	77	75	Heavy rain during night, day cloudy.
Tu.	19	85	80	75	77	74	71	74	73	72	Cloudy, noon heavy tornado and rain.
W.	20	83	78	73	79	77	75	78½	76	73½	Cloudy, noon heavy rain.
Th.	21	85	78½	72	83	79	75	76	74	72	Cloudy, **4** p.m. heavy rain.
F.	22	83	78	73	84	79½	75	80	77	74	Day very fine, shower at noon, **9** p.m. left Fernando Po.
S.	23	81	77	73	81	77	73	80	76	72	Fine, **6** a.m. anchored off Bimbia.
Su.	24	82	77	72	85	78½	72	81	78	75	Very fine, at anchor.
W.	25	80	78	76	86	79	72	77	74	71	Very fine, **5** p.m. heavy thunder-storm, evening rainy.
Tu.	26	76	73	70	83	79	75	79	76	73	Very fine, **1** p.m. steamd. to **1** of the islds., **4** p.m. h. rain, left for Fern. Po, ev. rainy.
W.	27	80	77	74	84	77	70	76	74	72	6 a.m. anchored at Fernando Po, cloudy, sultry.
Th.	28	82	76	70	85	78	71	76½	74½	72½	Very fine.
F.	29	76	74	72	86	78	70	77	75	73	do. do.
S.	30	79	76	73	84	77	70	80	77	74	Rain from daylight till **11** a.m., afternoon fine.

TABLE XVI.

Thermometer and Hygrometer, May 1842. *The River Cameroons, the Amboines, Bimbia, & Fernando Po.*

Date,		9 A.M.			3 P.M.			9 P.M.			Remarks.
W.	M	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
Sun	1	74	71	68	80	77	74	75	73	71	
M.	2	80	74	68	83	79	75	80	73	66	Very fine, at anchor N. W. Bay, Fernando Po.
Tu.	3	83	77	71	84	78	72	81	77	73	Day-light left North West Bay, 6 p.m. anchored at Bimbia.
W.	4	82	78	74	84	78	72	83	78	73	Very fine, 7 p.m. anohored off Cameroons.
Th.	5	81½	78	74½	85	80	75	82	78	74	8 a.m. anch. inside river Cameroons, v. fine, 20 miles from Entrance.
F.	6	84	80	76	85	80	75	81	79	77	Very fine, 12 a.m. steamed up river, 4 p.m. anchored, 8 p.m. heavy rain.
S.	7	80	78	76	83	78	73	79	77	75	Cloudy, fine.
Sun	8	81	77	75	83	77	71	79	77	75	Very fine.
M.	9	82	78	74	85	77	69	83	79	75	Very fine, hot.
Tu.	10	77	74	71	83	76	69	79	76	73	Very fine.
W.	11	81	77	73	87	79	71	82	78	74	Very fine, 9 a.m. steamed down river.
Th.	12	79	76½	74	81	77	73	81	77	73	Nn. cloudy with rn. till nn., aftern. fine, 6 p.m. out of the river. 8 p.m anch.
F.	13	81	77	73	84	78	72	81½	78	74½	Fine, anchored off Amboines Islands.
S.	14	84	78	72	84	78	72	77	76	75	Fine, cloudy, anchored off Ajouge.
Sun	15	78	75	72	79	74	69	76	74½	73	Rain during night, morning cloudy, 1 p.m. heavy rain.
M.	16	79	76	73	82	77	72	77	75	73	6 a.m. h. rn morn. cloud. aftern. fine, 12 p.m. h. tor. with const. rn. tl. mor.
Tu.	17	80	77	74	82	77	72	77	75	73	Morn. rainy, 8 a.m. left Ajouge, 3 p.m. anchored off Pirate Islands.
hh.	18	83	76	69	85	79	73	77	74	71	Very fine, at anchor off Pirate Islands Amboines.
Th.	19	84	79	74	85	78	71	80	77½	75	Very fine, at anchor off Pirate Islands.
F.	20	84	78	72	84	78	72	82	78	74	Very fine, 2 p.m. anchored off Bimbia.
S.	21	83	78	73	85	79	73	80½	78	75½	Very fine, off King William Town, Bimbia, 10 p.m. heavy tornado.
Sun	22	79	74	69	84	77	70	81	77	75	Very fine.
M.	23	74	71	68	77	74	71	79	75	71	Morning rain, 10 a.m. left Bimbia, rain till noon.
Tu.	24	82	75	68	86	79	72	78	75	72	Very fine, 9 a.m. anchored in Clarence Cove.
W.	25	83	77	71	87	79	76	77	74	71	Very fine, hot.
Th.	26	84	78	72	80	77	74	78	75	72	Fine, 11 a.m. rain, afternoon cloudy.
F.	27	76	74	72	80	76	72	77½	75	72½	Rain till noon, afternoon cloudy.
S.	28	80	76	72	82	78½	75	77	74	71	Cloudy, afternoon fine.
Sun	29	82	75	68	85	77	69	79	76	73	Very fine.
M	30	80	76½	73	83	78	73	79	77	75	Very fine.

TABLE XVII.

Thermometer and Hygrometer, June 1842. *At Fernando Po, Prince Island, and the Amboines.*

Date.		9 A.M.			3 P.M.			9 P.M.			Remarks.
W.	M	Dry	Wet	Dew point	Dry	Wet	Dew point	Dry	Wet	Dew point	
W.	1	80	75	70	82	77	72	75	73	71	Rain till 5 a.m., day fine with slight showers, evening cloudy.
Th.	2	77	75	73	81	76	71	78	75	72	Cloudy, fine.
F.	3	80	76	72	81	77	73	77½	75	72½	Rain from 2 a.m. to 5 a.m., morning cloudy.
S.	4	75	73	71	81	76	71	74	72	70	Morning cloudy, day fine.
Sun	5	84	76	68	82	74	66	81	76	71	Very fine, noon cloudy, 6 a.m. left F. Po for Princes Isl. even. showers.
M.	6	82	76	70	82	76	66	78	74	70	Rainy with heavy swell.
Tu.	7	81	76	71	79	76	73	80	76	72	V. fine, 10 a.m. at West Bay, 3 p.m. anch. in St. Antonia Bay Princes.
W.	8	78	75	72	81	76	71	78½	74	69½	Very fine, 8 a.m. heavy rain, afternoon fine.
Th.	9	80	75	70	79	74	69	78	74	70	V. fine, breeze, 10 a.m. left Princes, showery, anch. in West Bay.
F.	10	79	74	69	80	74	68	79	74	69	Day-light left West Bay for Fernando Po, fine.
S.	11	82	77	72	83	77	71	76	74	72	Very fine, 8 a.m. anchored in Clarence Cove, 4 p.m. heavy rain.
Sun	12	82	76	70	82	76	70	80	75	70	Very fine, 7 a.m. left Fernando Po, 2 p.m. anchored off Amboines.
M.	13	80	77	74	83	77	71	80	76	72	6 a.m. rain, day fine.
Tu.	14	82	77	72	83	77	71	80	77	74	Very fine.
W.	15	81	77	69	82	78	74	79	75	71	2 a.m. tornado and heavy rain, day cloudy, misty.
Th.	16	79	76	73	81	76	71	79	76	73	3 a.m. heavy rain, morning cloudy, day fine. 11 p.m. heavy tornado.
F.	17	76	73	70	80	75	70	77	73	69	Cloudy, fine.
S.	18	78	76	74	83	77	71	76	71	66	Fine, 5 p.m. squall of wind and rain.
Sun	19	78	73	68	81	75	69	80	77	74	Very fine.
M.	20	80	75	70	76	73	70	73	71	69	Morn. very fine, 1 p.m. torn. with h. rn. noon left Pirate Isl. for F. Po.
Tu.	21	77	74	71	80	75	70	76	74	72	Fine, cloudy, at anchor in Clarence Cove.
W.	22	76	73½	71	79½	74	68½	76	71	66	Fine, cloudy.
Th.	23	79	74	69	81	75	69	77	75	73	Very fine, calm.
F.	24	79	76½	74	80	75	70	75	73	71	Very fine, cloudy.
S.	25	80	75	70	79	76	73	75	73	71	Cloudy, 1 p.m. heavy rain, afternoon fine.
Sun	26	82	76	70	78	75	72	76½	74	71½	Fine, 2 p.m. rain.
M.	27	80	75	70	82	76	70	75½	73	70½	Cloudy, rain most of day.
Tu.	28	78	75	72	80	76	72	76	73½	71	Cloudy, misty.
W.	29	81	75	69	80	74	68	75	73	71	Cloudy, fine.
Th.	30	80	75	70	81	75	69	77	74	71	Do.

TABLE XVIII.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

June 21, 1841, *at Sea between Cape de Verdes and Sierra Leone.*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	76	74	72	P.M. 6	77½	74	70½
7	76	74½	71	7	77	74	71
8	78	75	72	8	77	74	71
9	78	75	72	9	77	74	71
10	79	74	69	10	78	74	70
11	82	77	72	11	78	74	70
12	79	74½	68	12	78	74	70
P.M. 1	79½	75	70½	A.M. 1	78	74	70
2	79	75	71	2	80	76	72
3	78	74	70	3	78	75	72
4	78	74	70	4	78	75½	71
5	78	74	70	5	77	75½	72

TABLE XIX.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

July 21, 1841, *at Sea between Cape Palmas and Cape Coast Castle.*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	76½	74	71½	P.M. 6	79	75	71
7	78	75	72	7	79	75	71
8	78½	75	71½	8	80	76	72
9	78½	75	71	9	80	75½	71
10	80	75	70	10	79	76	73
11	80	75	70	11	79	76	73
12	79	74	69	12	79	76	73
P.M. 1	80	75	70	A.M. 1	79	76	73
2	80	75	70	2	79	76	73
3	81	76	71	3	79	76	73
4	81	75	69	4	79	76	73
5	80	75	70	5	78	75	72

TABLE XX.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

August 21, 1841, *in the River Niger.*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	75	73½	72	P.M. 6	78	75	72
7	79	76	73	7	77	75	73
8	80	75	70	8	78	76	74
9	82½	76	69½	9	79	76½	74
10	82	75	68	10	79	76	73
11	82	76	70	11	79	76	73
12	82	77	72	12	79	76	73
P.M. 1	81	76	71	A.M. 1	79	75	71
2	82	76	70	2	81	76	71
3	83	76	69	3	81	76	71
4	81	76	71	4	80	76	72
5	79	75	71	5	80	76	72

TABLE XXI.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

Nov. 22, 1841, *at Ascension.*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	74	66	58	P.M. 6	77	70	63
7	75	66	57	7	76	70	64
8	78	68	58	8	76	70	64
9	79	67	55	9	75	69	63
10	80	68	56	10	75	69	63
11	82	70	58	11	75	69	63
12	81	70	59	12	75	69	63
P.M. 1	80	70	60	A.M. 1	74	69	64
2	80	70	60	2	73½	68	62½
3	79	69	59	3	72½	68	63½
4	78	69	60	4	74	68	62
5	79	70	61	5	74	67	60

TABLE XXII.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

March 21, 1842, *at Cape Coast Castle (Governor Maclean's).*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	78	76	74	P.M. 6	83½	80	76½
7	79	77	75	7	83	79	75
8	81	78	75	8	83	78	73
9	83	79	75	9	83	78	73
10	85	80	75	10	82	78	74
11	86	81	76	11	83	77	71
12	87½	85	75½	12	81	77	73
P.M. 1	90	83	76	A.M. 1	78	75	72
2	90	82	74	2	78	76	74
3	87	80	73	3	78	76	74
4	86	81	76	4	78	76	74
5	85	80	75	5	78	76	74

TABLE XXIII.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

April 21, 1842, *at Fernando Po (Mr. White's House).*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	75	73	71	P.M. 6	77	75	73
7	77½	74½	71½	7	77	75	73
8	82	77	72	8	77	75	73
9	85	78½	72	9	76	74	72
10	84	80	76	10	76½	74½	72½
11	85	80	75	11	75	73	71
12	84½	79	73½	12	74	72½	69
P.M. 1	83	78	73	A.M. 1	74	72	70
2	82	78	75½	2	73½	72	70½
3	83	79	75	3	73	71	69
4	75	75	75	4	72½	71	69½
5	75	74	73	5	73	71	69

TABLE XXIV.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

May 21, 1842, *at Bimbia (King William's House).*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	78	76	74	P.M. 6	80½	78	75½
7	79	77	73	7	80½	78	75½
8	82	78	74	8	82	79	76
9	83	78	73	9	80½	78	75½
10	84	79	74	10	73	73	73
11	84	79	74	11	73	72	71
12	84	79	74	12	74	72	70
P.M. 1	86	80	74	A.M. 1	74½	72	69½
2	85	79	73	2	75	72	69
3	85	79	73	3	74	72	70
4	83½	79	76½	4	73½	72	70½
5	82	78	77	5	73	73	73

TABLE XXV.

STATE OF THE THERMOMETER AND HYGROMETER.

HOURLY OBSERVATIONS.

June 21, 1842, *at Fernando Po (Mr. White's House).*

	Dry.	Wet.	Dew point.		Dry.	Wet.	Dew point.
A.M. 6	73	71	69	P.M. 6	80	76	72
7	74	71	68	7	78	75	72
8	75	72½	70	8	76½	74	71½
9	77	74	71	9	76	74	72
10	77	74	71	10	76	74	72
11	78	74	70	11	76	74	72
12	78	74	70	12	75	73½	72
P.M. 1	79	75	71	A.M. 1	74	72½	71
2	79	75	71	2	73½	72	70½
3	80	75	70	3	72	71	70
4	80	76	72	4	72	71	70
5	81	76	71	5	73	71	69

H.M. Steam Vessel, WILBERFORCE.

TABLE XXVI.

CABIN AND GUN-ROOM OFFICERS.

NAMES.	Age	In what country born and educated.	Trade or Occupation.	How long at Sea		How long abroad, and in what Country.	What disease he has had already.	Married or Unmarried.	Temperament.	General appearance.	Height.	If attacked with Fever.	Nature of Fever.	Termination.
				In Man of War.	Merch. Service.						Feet Inc.			
William Allen		London	Captain			6 yrs in Java & E.I. 18 mos in Niger prev. many yrs in var. coun. of Eur.	Fev. in Niger prev.	Single.	Sanguineous.	Healthy, pleth	5 5	Yes.	Not. sev.	Recovery
William Cook		Scotland	Civil Commissioner			40 yrs in E. & W. Ind. & coast of Afr. but principally in W. Indies.	Fev. in West Indies.	Married.	,,	,,		No.		
James N. Strange	29	Halifax	Lieutenant	15 yrs.		East and West Indies, and coast of Africa.		Single.	Sanguineous.	Full health.	5 8	No.		
Henry C. Harston	29	England	Lieutenant	16 do.				,,		Healthy.	5 6	Yes.	Very sev.	Recovery
William Forster	21	England	Master	15 do.		15 yrs. S. America, Spain, Mediterr. and W. Indies.	None.	,,	Sanguineous.	Plethoric.	5 7	Yes.	Severe.	,,
Morris Pritchett	27	Plymouth	Surgeon	5 do.		4 yrs. West Indies.	Yellow-fev. in W. I.	,,	Nervous.	Pale, slight.	5 5	No.		
Cyrus Wakeham	48	England	Purser	20 do.		20 yrs. N. Pole, W. Ind. Cape of G. Hope, coast of Africa.	Ditto at Ascension.	Married.	,,	,,	6 0	Yes.	Very sev.	Death.
Theodore Vogel	28	Germany	Botanist			Not previously out of Europe	None.	Single.	Bilious.	Sallow.	6 0	Yes.	,,	Recovery
Theodore Müller		Switzerland	Chaplain			10 years in Egypt		Widower.	Nervous.	,,	5 9	No.		
John Schoen		Germany	Church Missionary			Resident several years in Sierra Leone.	Severe fev. S. Leone.	Married.	,,	Pale.	5 6	Yes.	V. slight.	Recovery
Alfred Carr, (coloured)		Trinidad, ed. in Eng	Planter			Usual residence, West Indies.		Single.	Bilious.	Yellow.	5 7	Yes.	,,	,,
MIDSHIP BERTH.														
Henry C. Toby	25	London	Mate	12 do.		6 yrs. coast of Africa, 6 yrs. Lisbon and Mediterranean.	None.	Single.	Bilio-sanguin.	Full health.	5 8	Yes.	Very sev.	,,
W. T. H. Green	26	Falmouth	2nd Master	8 do.	2 yrs.	5 yrs. W. Ind., 2 yrs. coast of Afr. N. & S. Amer. & Mediter.	Fev. twice W.I. & twice Af.	,,	Bilious, sallow.	Healthy,	5 8	Yes.	,,	,,
T. R. H. Thomson	28	Isle of Man	Assistant-Surgeon	4 do.		4 years South American station.	Small-pox.	,,	Sanguine.	,,	6 0	No.		
John Stirling	24	London & N. Scotia	Ditto			North America and England.	Typhus-fever.	,,	Nervous.	,,	5 2	No.		
J. R. H. Webb	23	Portsmouth	Clerk	2½ do.		1½ years at Denmark.	Headch. from fall 2 yrs ago.	,,	Do. Pale.	Weakly.	5 4	Yes.	Very sev.	Recovery
James C. Terry	22	Edinburgh	Commissionrs Clerk			9 years France, 1½ years Sierra Leone.	Fever twice S. Leone	,,	Nervous.	Healthy.	5 9	Yes.	,,	,,
William Simpson	55	Scotland	,,			9 years in Mexico and West Indies.	Yel.-fev. & black vom.	,,	Bilious, sallow.	Worn by clim.	5 10	Yes.	,,	,,
C. G. Roscher	26	Frybourg	Mineralogist			Never before out of Saxony.	None.	,,	Sanguin. fair.	Healthy.	6 0	Yes.	,,	,,
L. Frazer	23	Edinburgh	Zoologist			Never before out of England.	Small-pox.	,,	Phlegmatic.	Do. pale, pleth.	5 6	Yes.	,,	,,
ENGINEERS' BERTH.														
W. Johnstone	28	West Lothian	1st Engineer		2yrs. E.I.	India.	Coup-de-soleil.	Single.	Nervous.	Pale, healthy.	5 9	Yes.	Severe.	,,
Joseph Graystock	38	Stockport	2nd ,,			6 years Germany and Hungary, 3 years Switzerland	Acute rheum. & ague	Married.	Phlegmatic.	Pleth. brok. con	5 9	Yes.	Very sev.	,,
George Garritte	23	Liverpool	3rd ,,			Never out of England.	None.	Single.	,,	Plethoric.	5 6	Yes.	,,	,,
John Ancell	24	England	Gardener			Do. Do.	None.	,,	Sanguine.	Healthy.	5 4	Yes.	Severe.	,,
MARINES.														
George Cuthbertson	39	Ayr	Weaver	6 yrs.		2 yrs. Mediterranean, 1½ years East Indies.	None.	Married.	Phlegmatic.	Remar. healthy	5 9½	Yes.	Very sev.	Death.
Daniel Bloomfield	25	England	Marine	1 do.		Never before abroad	Small-pox.	Single.	Sanguine.	Healthy.	5 7	Yes.	Slight.	Recovery
William Innes	25	Edinburgh	Lithographer	1 do.		Do. Do.	,,	,,	,,	Pale, slight.	5 8	Yes.	Very sev.	,,
John Osborne	25	Suffolk	Farmer	7 do.		6 years Mediterranean station.	Typhus-fever.	Married.	Choleric.	Healthy, slight	5 11	Yes.	Not sev.	,,
Samuel Hill	39	Staffordshire	,,	7 do.		7 Ditto Ditto.	None.	Single.	Bilious.	Stout, healthy.	5 9½	Yes.	Very sev.	,,
William Day	34	Lincolnshire	,,	10 do.		10 Ditto Ditto.	,,	,,	Phlegmatic.	Plethoric.	5 9	Yes.	Not sev.	,,
George Veley	31	England	Marine	5 do.		5 Ditto Ditto.	,,	Married.	Bilious.	Bil. Healthy.	5 8	Yes.	,,	,,
William Ford	25	,,	,,	3 do.		3 Ditto on Lisbon station.	,,	Single.	Phlegmatic.	Muscul. stout.	5 8	Yes.	Severe.	,,
Thomas Roberts	29	,,	Miner	7 do.		3 Ditto West Indies, 4 coast of Africa.	,,	,,	,,	,,	5 10	Yes.	,,	,,
SAPPERS AND MINERS.														
Henry Rosemergy	21	Cornwall	Miner	6 mos.		Never before abroad.	Small-pox.	Single.	Nervous.	Good.	5 7	Yes.	Very sev.	Recovery
William Martin	29	North America	Wheelwright	16 do.		7 years Bermuda, 7 Gibraltar.	None.	,,	Sanguine.	Full health.	5 9¼	Yes.	Severe.	,,
William Rabling	23	Cornwall	Smith	6 do.		Never before abroad.	Small-pox.	,,	,,	Stout, bilious.	5 8	Yes.	Very sev.	Death.
James Cotter	30	Bristol	Bricklayer	6 do.		7 years in Bermuda.	,,	,,	Bilious.	Healthy.	5 11	Yes.	Severe.	Recovery
SHIP'S COMPANY.														
Henry Collins	26	Wolverhampton	Blacksmith			Never before out of England.	None.	Married.	Nervous.	Good.	5 8¼	Yes.	Severe.	Recovery
James Kneebone	23	Devonshire	Seaman	1 yr.	3 yrs.	Never off the coast of England.	Ditto.	Single.	Leucophlegm.	,,	5 11	Yes.	Very sev.	Death.
William Funge	26	Greenwich	Waterman			Never before out of England.	Small-pox.	Married.	,,	,,	5 7	Yes.	Rath. sev.	Recovery
Richard James	24	Cornwall	Wheelwright	1 do.		Ditto. Ditto.	,,	Single.	Phlegmatic.	Pale.	5 5¼	Yes.	Not sev.	,,
Henry Hillier	25	London	Joiner	3 do.		2 years Mediterranean.	,,	,,	Sanguine.	Healthy.	5 7	Yes.	,,	,,
William Lucas	26	Cornwall	Farmer	6 do.		North America, West Indies, and Mediterranean.	,,	Married.	,,	,,	5 9	Yes.	Very sev.	,,
Absalom Delavanti	50	Morocco	Shipmerchant			20 years in England.		,,	Choleric.	Worn. by clim	5 2	Yes.	,,	,,
Frederick Gurney	35	Surrey	Seaman	16 do.	6 do.	18 years N. & S. America, E. & W. Indies, & Mediterr.	Sm-pox & rheumat.	,,	Sanguine.	Healthy.	5 8	Yes.	,,	,,
William Bailey	22	Lancashire	Cooper	6 mos.	9 mos.	North America.	Small-pox.	Single.	Phlegmatic.	Pale, healthy	5 4	Yes.	,,	,,
Joseph Hopkins	35	Greenwich	Sailmaker	9 yrs.	9 yrs.	3 years Africa and Spain, 3 years West Indies.	,,	,,	,,	Musc. healthy.	5 8	Yes.	Not sev.	,,
George Boyce	22	Hampshire	Farmer	5 do.	1 do.	Mediterranean, North and South America.	,,	,,	Sanguine.	Healthy.	5 7	Yes.	Very sev.	,,
John Waddington	30	Lancashire	Miller	3 do.	12 do.	West Indies, South America, and Gibraltar.	None.	Married.	,,	,,	5 10	Yes.	Not sev.	,,
George Croft	27	London	Seaman	1 do.	merch.	West Indies and America.	Small-pox.	,,	Nervous.	Slight, Pale.	5 7¼	Yes.	Very sev.	,,
Michael Walsh	29	Dublin	Joiner	5 mos.		Never before abroad.	Ditto and fever.	Single.	Phlegmatic.	Pale, sickly.	5 11	No.		
David Douglas	27	Perthshire	,,	6 yrs.		Mediterranean.	Small-pox.	,,	Nervous.	Do. emaciated.	5 4	No.		
William Allford	23	London	Seaman	3 do.		North Coast of Spain	Ditto and fever.	,,	Sanguine.	Slight, healthy	5 4	Yes.	Very sev.	Death
William Ward	39	London	,,	4 do.	24 yrs.	South America, and East and West Indies.	Rheumatism.	,,	,,	Pleth. intemp.	5 11	Yes.	V. Slight	Recovery
Richard Smitheys	21	South Sea	Baker	9 do.		South America, West Indies, and Mediterranean.	None.	,,	Nervous.	Slight, healthy	5 7	Yes.	Rath. sev.	,,
John Wilson	21	Devonshire	Servant	8 mos.	2 do.	Africa.	Small-pox.	,,	Sanguine.	,,	5 6	Yes.	,,	,,
Edwin Hoskin	21	Pembrokeshire	Seaman	6 yrs.		Coast of Spain.	None.	,,	,,	Very healthy.	5 9	Yes.	,,	,,
STOKERS.														
James Carr	27	Ireland	Stoker	6 mos.	11½ yrs.	7½ years Mediterranean.	Rheumat. & sm.-pox.	Single.	Phlegmatic.	Healthy.	5 6	Yes.	Not sev.	Recovery
Peter Fitzgerald	27	Wexford	Farmer	10 do.	7 do.	15 months Africa.	Small-pox.	Married.	,,	,,	5 8	Yes.	Very sev.	Death
Joseph M'Lusky	22	Lancashire	Stoker	6 do.	1½ do.	Never before out of England.	None.	Single.	Sanguine.	,,	5 8	Yes.	,,	Recovery
COLOURED MEN ENTERED IN ENGLAND.*														
John Joseph Garner	33	Barbadoes	Taylor	5 do.	5 mos.	West Indies	Small-pox.	Single.		Do. yellow.	5 4	Yes.	Severe.	Recovery
John Dennis	24	Gambia	Seaman	8 mos.	8 yrs.	North America principally.	Rheumatism.	,,		Black.	5 11	Yes.	,,	,,
James Case	30	North America	,,	9 yrs.	8 do.	North America, England, and West Indies.	Sm.-pox & intermitt.	,,		Yellow.	5 11	Yes.	,,	,,
William Scott	26	Jamaica	,,	8 do.	6 do.	North America and West Indies.	None.	Married.		Black.	6 1	Yes.	,,	,,
James Peters	28	Houssa (Africa)	,,	14 do.		4 years coast of Africa, 10 England and West Indies.	Small-pox.	Single.		,,	5 5	Yes.	,,	,,
William Jackson	21	Jamaica	,,	5 do.	2 do.	5 years West Indies and North America.	None.	,,		Yellow.	5 6	Yes.	,,	,,
Lewis Asasa	29	Arabia	Servant				None.	,,		Quite black.	5 3	No.		

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* Remarks.—It is somewhat singular that these black and coloured men were attacked with fever during the prevalence of rains in our progress along the coast and previously to entering the River. If attacked in the River, the disease in these men almost invariably exhibited the intermittent type, and was mild.—M P.

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